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TREATMENT OF CHRONIC DISEASES, WITH SPECIAL REFERENCE TO INDIGESTION.

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If ever there was a time that the medical profession had daily impressed upon them that heroic dosing—especially in chronic cases not, in their nature, necessarily fatal—should cease, it is the present. In the MED. AND SURG. REPORTER of August 30, under the title of "Abuse of Drugs," an article is published which should be perused by all overdosers. The writer says: "In 1834, while attending a provincial infirmary, he was struck with the recovery of patients given up to die. The medicines, especially mercury, iodine, and iodides, would be suspended, and the nurse have orders to treat the patient kindly before dying. Immediately recovery would occur."

This impressed him, and ever since he has studied whether medicines were doing good or harm. In Brazil his success was in cases treated by others. He would merely suspend the medicines, and put the patient upon hygiene, science, and common sense, correcting ignorance, neglect, and bad habits, as to food, air, exercise, baths, etc.

His success in chronic cases was great, and the people declared that he must have used medicines, and strong ones, too, for he could not have made such cures otherwise. The italics are my own. My only regret is that I had not absorbed such truths when first beginning the practice of medicine. Just as quinine shows striking results in malarial fever, potass. iod. in syphilis,

so all medicines have a place and good effects when properly used. We know that quinine can produce deafness, and that incurable, and the others act just as deleteriously. The thing is to know when, how long, and in what amounts to use them.

I have known epilepsy much relieved by potass. brom., and by too long continuance of that drug have seen the same epileptic become almost imbecile. The bromide being discontinued, and tonics given, the neighbors have been astonished to see comparative health of mind and body return. In this enlightened age, I know physicians of large practice and undoubted ability (mental) who continue as many as four different combinations at one time, and each bottle, or pill, containing from two to four or five distinct drugs. What can we say under such circumstances but that the patient—if he recovers—"gets well in spite of the treatment."

It is of chronic indigestive troubles I wish to speak, and of all complaints, it seems to me that the above remarks are most pertinent here.

A case of chronic diarrhoea presents itself to a young, inexperienced or an old experienced doser. The former grasps his head between his hands, and tries to recall to memory all the drugs he knows, or has heard of, which are vaunted as "specifics" in this trouble, so that he may combine them, and thus be sure of a cure. The latter formulates his "stand-by"—four or six drug combination—and the patient departs to struggle, not only with his former trouble, but also with this extra load of system-damaging medicines. When such lights as Hilton tell of the wonderful results they have had from "rest;" when that

charming writer Dr. Fothergill gives us a glimpse of what scientific use of drugs is; when we learn of the gratifying results received from proper food, healthy surroundings, protection of the body, etc., impressed by such authority as Dr. Pepper, why is it that the "rank and file" still grasp at every newly-vaunted drug as the long-looked-for restorative? I have known a gentleman of phthisical family having retained a cold for weeks, which threatened to end disastrously, get rid of all untoward symptoms, by what drug?—by discontinuing the habit of taking off his warm boots, and putting on his slippers on arriving at home in the evening.

I read but to-day of an intractable case of prickly heat—after all medicines had failed—being at once relieved by the patient changing from his short-sleeved light undershirt to thick long-sleeved garments, by which perspiration was absorbed, and tendency to sudden chilling prevented.

In all chronic digestive troubles certain directions should be given, whatever organ be the one diseased. Give that organ rest, support, and protection. I never speak of rest as a means of cure to my patients without recalling the benefit I received [from reading Dr. Hilton's book entitled "Rest and Pain." The following are among the truly suggestive thoughts of the Doctor, and also letters he received. Speaking of the necessity of rest to plants as a means of growth, and impressing the truth that "repair is but the repetition of growth," he further remarks:

"In my reflections on the subject of rest as a curative agent, my mind naturally reverted to that period of man's existence when it was the sole curative means of which he could avail himself. I could but picture to myself the timorous awe which must have been engendered in his mind by the first accident which happened to him. Let us imagine our first parents suddenly thrust out of the garden of Eden, and doomed to toil for their daily bread; with hands unused to labor, inexperienced in the substitutes for unnecessary exertion, and in the avoidance of local injury, and exposed to all the accidents of a precarious existence."

Let us try to realize the awe-stricken dismay which must have oppressed man's mind on the infliction of his first wound, his first experience of pain; the breach of surface disclosing to his sight his blood flowing unceasingly, or leaping at sustained intervals from its opening chambers, his sense of fainting, and his ultimately sinking on the earth under the foretaste of death; this,

too, with the recent denunciation, "Thou shalt surely die," still ringing in his ears.

Can words depict the hopeless anguish which he must have endured? But what follows? See him awakening to life again, the stream of blood stayed, the chasm plugged, his strength revived, and day by day that wound—which he regarded as the badge of death, the vengeance of the Creator's wrath—narrowing and healing till it could hardly be seen. * * * * Pain was made the prime agent. Under injury, pain suggested the necessity of, and, indeed, compelled him to seek for rest. Every deviation from this necessary state of rest brought with it, through pain, the admonition that he was straying from the condition essential to his restoration. But not alone do we use rest as a means of cure in surgical injuries, as the following letters most emphatically prove:

"My Dear Doctor: In reply to your inquiries, I may state that I am frequently applied to for the admission of lunatics into this hospital, whose insanity is caused by over mental work, anxiety, or exertion, and for whose cases nothing is required to restore the mental equilibrium but rest.

"Therapeutical measures are not necessary. All the mind seems to need is entire repose. I do not by this mean to imply that the patient, reduced to a state of nervous hypochondriasis, or the depression of melancholia, is to lead an indolent life. Such a course would only aggravate the disease, and probably result in complete dementia; but that those faculties which have been over-stretched should have an opportunity of regaining their elasticity by rest and relaxation. I could give you examples from the wards of this hospital, where we are called upon to treat mental symptoms in the cases of governesses, students, clerks, and clergymen; and rest is all they require, and with that the most aggravated cases are restored."

"My Dear Sir: I cannot resist the temptation to tell you a case which offers a striking illustration of the principle so admirably explained and enforced in your lectures at the College of Physicians and Surgeons, and for which our profession is deeply indebted. Nearly twenty years since, I attended a lady who for eight or nine years had been afflicted with intense headache and intolerance of light, commencing on first awakening in the morning, and persisting, more or less, all day, totally disabling her, and, during many months, confining her entirely to her house. I learned that she had consulted several medical gentlemen, both in London and the provinces. Under an impression of inflammatory mischief in the brain, Dr. Marshall Hall ordered her a scalp issue with twenty

peas, which was prolonged for several weeks; she underwent a long course of mercury, was cupped many times, blistered, etc., etc.

"Under other advice, she took tonic medicines of various kinds, and made a journey on the Rhine, etc. All seemed useless, and she resigned herself to despair.

"At my first examination of the case I learned that a severe frown was caused by the first influx of light in the morning; then followed headache, etc. My impression was that if I could avert this spasmodic action (by physiological rest), and break the habit of return by mechanical means, I should prevent the other symptoms; and so it happened. I merely covered one eye with a card, about the size of a crown piece, and attached an elastic tape to it, so that it passed around the head, across the forehead, and over one eye, slightly compressing the occipito-frontalis, and corrugators. This simple device effectually prevented the frown, and there was at once an end to the mischief.

"The only further treatment required was to gradually accustom the eyes to light and action; and this was readily done by using one at a time for two hours, and then changing the card to the other eye, regulating the admission of light. In other, but still more expressive words, I gave 'rest to parts' morbidly excited; and so this most terrible malady vanished as a charm. The patient continued free from the complaint during the remainder of her life, and died about two years ago."

I do not know how the English language could be used to a greater advantage than to the above letters to impress the absolute necessity of physiological rest of the part diseased, if any benefit is to accrue to our patients. Additional words would only detract from the picture, or be a useless repetition. In indigestion we procure physiological rest by the diet we give our patients. How essential, then, that we study well the many interesting and constantly additional facts we have given us, as regards the duties performed by the different organs. If we can feed an individual, suffering from bowel trouble, with food entirely digested by the stomach, we at once secure what is needed—rest to the part diseased, and nourishment to our patient.

Before leaving this point, I wish to quote the following: "The function which influences all others is digestion." This all right, all is right; and vice versa. Cures, after operations, are accomplished by nutrition; and this will be good or the contrary, as the digestion is good or the contrary. This subject of digestion and nutri-

tion should be well understood by surgeons. The preparing a patient for operation, or treating him after, hangs much on this. Whatever dexterity a surgeon may have, he should also understand physiology as well, to have success. He may fail sometimes from neglect of the simplest dogmas of physiology. A friend and myself when abroad had many cases of cataract. We did the operation in the same way; he better than I, for I had no gift of hands. He lost very many of his cases, and mine succeeded.

He said one day, he could not understand this. I replied: "It is simple; you let your patients eat and drink as they and friends like after the operation, while I starve mine from one to two days, till the wound is healed and the retina is safe." A full stomach or improper food will befool the best-done operation. I have cured serious fractures without fever intervening merely by semi-starving the patient. In my own case, when shot in the head, I abstained from all but water, or a little tea or dry toast, for days, and had scarcely any pain and no fever or erysipelas.

"After days I used stewed prunes, potatoes, mashed with salt, butter, to be simple and laxative. I took no wine and no meat for weeks, and a remarkable cure was the result."

Not only physiological rest, but sometimes mechanical rest of the body is urgently called for. Thus in chronic diarrhoea, though there be no ulceration, yet so weak has the whole body become, so lax and sensitive the bowels, that, for a time, at least, bed is the only place, but, I would add, to be kept there only so long as is necessary. In one of the letters quoted, in regard to the patient suffering from mental depression, the writer says: "Of course, we do not propose that the whole mind should remain fallow, but that pressure should be removed from the particular part which is fatigued." I do not think we can lay too much stress upon the necessity of giving *pleasurable interest* in life to our patients.

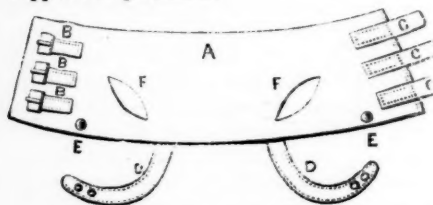
The "rest cure" (absolute rest in bed, only the nurse and doctor allowed to see the patient, not even letters from home allowed, etc.), has in it this objection, viz., that thrown on their own resources, the morbidly prone and weary sufferer thinks and longs only for death.

These remarks are especially applicable to the subjects I am writing about.

Stonewall Jackson is quoted as saying that he knew of no trouble (himself a sufferer from it) which afflicts humanity, where a man could have such allowance made for him for committing suicide, as in that commonly called dyspepsia.

Now, though the organ at fault be so weakened by disease as that mere movement on the part of the patient would distress him and bring on renewed misery—as walking or riding when the patient is suffering from chronic diarrhoea—yet, if by properly supporting that or those organs, we should thus be enabled to allow our patients to enjoy fresh air, pleasurable experiences, light exercise, etc., what incalculable benefit do we bestow upon them? When the arm is broken, we put it in splints, and so enable the patient to move around; so if we could only brace and support the bowels—liable as they are, when diseased, to be irritated by great amount of movement—we could give them aid enough to allow out-door enjoyment.

In one case of chronic diarrhoea under my care, a young gentleman of active mind and, formerly, physically energetic, I found it impossible to keep him in bed. Weakened as he was by long-exhausting “talks” of one physician, and calomel “to put his liver in good condition” by another, he would get out of bed, and, though very warm weather, attempt to ride or walk, and always with the most serious consequences following. He could, as he said, feel his bowels hanging down, dragging on him, every step he took, or jog the buggy gave. I at last had a bandage made, as in the following cut, with the design of support and protection:



A—Two thicknesses of red flannel. B—Buckles. C—Straps. D—Perineal straps. E—Buttons for the perineal straps. F—Openings for superior processes of the ilium.

If any one has doubts as to the aid such a bandage gives, let me say that if the doubter will only go through the experiences of one who has suffered from indigestion leading to chronic diarrhoea, until he feels so weak that the thought of an exertion, either physical or mental, is utterly distasteful to him, he will find his abdominal walls, with the rest of his tissues, are weak and lax, his bowels empty and dragging. If then a bandage is made—such as the one illustrated—and fitted to him snugly and comfortably tight, words of mine would be useless to impress him with the comfort and assistance it gives.

By holding the bowels up it relieves the feeling

of weight and dragging, and also soothes the parts by the warmth it imparts, as well as protecting from sudden chilling. Protection, then, is also accomplished by it; and protection, general and local, is what I now wish to speak about. Probably I had better say external protection, general and local.

We have heard so much of the efficacy of medicated pads, such as liver and stomach, that the laity, if not some of the profession, thoroughly believe that these pads have in them real medicinal properties. They have just these virtues—support, protection, and warmth to the part to which they are applied. I have known of diarrhoea, uncontrolled by drugs, which at once began to yield after the application of a proper bandage.

No doubt the protection from chilling aided much in the cure. An organ weakened and depressed by disease necessarily has but poor circulation. It cannot, therefore, properly perform its functions, nor protect itself from changes of temperature. Artificially aided by external covering, blood is drawn to the part, circulation is increased; and shielded from external influences, the worn and disheartened organ takes fresh courage, and manfully performs its duty, where before there had been apathy and torpor. Not only, however, can our weakened member be injured by local chilling, but so constructed are we that any part left unprotected, and the person thereby taking cold, the brunt of the trouble falls on the weakest and most susceptible part. Therefore it behooves us not only to see to local, but also to protection of the whole body. I have already related a case where a troublesome cough was kept up by the gentleman changing his warm boots for slippers when coming home in the evening. This is a forcible illustration of what mischief can be done by little indiscretions. The sooner we grasp the truth that to a diseased body there are no little indiscretions, the sooner will we benefit our patients. It is utterly impossible for one accustomed to perfect health to realize what care it takes to maintain a comfortable degree of strength in a diseased body; and they also fail to realize how, by a proper amount of thoughtfulness, one can get good, noble work out of a naturally feeble frame. Far be it from me to advocate making hypochondriacs of our patients, teaching them to fear their own shadows; but we can, and if we do not we fail as physicians, teach them the absolute necessity of using their common-sense ideas, as well as exercise, food, sleep, etc. Friends may think such a person “hipped,” or that they will starve,

grow peculiar or are already so; but friends, as well as enemies, often judge us unjustly, and the sooner we learn to know what we can and what we cannot do, and live accordingly, utterly indifferent to remarks, the better for our physical and all other parts of our nature.

The writer, when himself broken in health, going to one of Philadelphia's leading physicians, and presenting himself with low shoes, although in August and the weather very warm, will not soon forget the stern look of his medical friend, and his short but expressive remark, to take off those shoes and never be seen with such again. The whole body should be properly clothed. Linen or muslin for underwear should be discarded—flannel; and that of good thickness, for winter, and long-sleeved gauze for summer.

As we contemplate the utter recklessness of people, especially ladies, as to proper clothing, the wonder to a sane person is that so many manage to keep a respectable amount of health. Nor am I alluding alone to "party dress," but to the garments worn in daily life. The theory that the lightest garments consistent with the ability to resist cold, and bed-rooms the temperature of the outside air, even in winter—the theory that these are elements in assisting one to maintain or procure robust health, is utterly false and evil in its tendency.

The temperature of the bed-room at 65°, and good, heavy flannel for winter use, are essential to those in feeble health, and great aids to preservation of robustness. But just as we, as Americans, injure ourselves by having our sleeping apartments too cold, so we debilitate our bodies by our over-heated living rooms. The one object of some seems to be to have the furnace at such fever heat that they are necessitated to either perpire freely or else open the windows, even though it be mid-winter. We should not need a medical adviser to raise his voice against the pernicious effects of such living. To breathe such air and live in such a temperature, would injure the most robust constitution.

Just as to a well-balanced character personal watch is needed to detect errors and remedy faults, so to maintain good health details must be attended to; not only certain, or particular, but all details. Though we detect the diseased organ, support and protect it, and the whole body, yet other minutiae demand our attention. We have already touched on the necessity of pleasant surroundings, congenial society, as additional aids, which in their effects will surprise us if we can but use them. Facts are what we want, so

I will quote from an experienced and practical writer: "A very distinguished man of letters, of nervous temperament, once told me that in good company he could eat an equally good dinner, but *dining alone he had to limit himself to the simplest fare.*"

"For how many patients can we write the prescription to take two months' holiday, to withdraw from all toil and care, and to live in good company, on refined and delicate food, and yet how potent are such means when all else may fail."

Mr. Teale and myself tried in vain to cure a clever, impulsive, and over-worked Leeds clothier of gastralgia, mixed with some consequent dyspepsia, until we sent him on a sea voyage. His own words on his return were: "After a few days bile could not live on my stomach, and my tongue was as clean as if I had manufactured it myself."

I think we may lay it down as an axiom that we cannot properly help nervously broken patients if we fail to urge upon them the necessity of seeking pleasurable sights. A nervous system depressed and diseased by sorrow or over-exertion in the routine of business, needs the stimulus of pleasurable sensations. It calls for them as an empty stomach calls for food, and just as food satisfies and strengthens the stomach for future usefulness, just so do legitimate pleasures, by their healthy stimulus, satisfy and strengthen the nervous system.

As continued grief will destroy the healthiest organization, pleasure, its antagonist, will build up. Freedom from anxiety, enjoyment, are necessary to neurasthenics. But what has this article on indigestion to do with neurasthenics?

Just this: that in every aggravated case of malnutrition the nervous system is primarily or secondarily affected; and once diseased, it becomes the main obstacle to restoration of the individual to health. Pleasurable living includes not only congenial company and pleasant sights, but also proper occupation of the faculties not diseased. I do not know how I can better impress what I have said than to briefly relate the following cases:

A young lady of active mind, nervous temperament, ambitious and attempting to satisfy her ambition, overworked herself at one of the leading young ladies' colleges. Nervously prostrated, sleepless, easily excited, and excitement followed by violent, continued headaches; appetite for food either capricious or entirely lost; intensely melancholy—she was, indeed, a sad illustration of the evil effects of over brain-work. Though feeling so miserable, she joined a party of friends, and passed six weeks at a secluded, but attractive

resort. Boating, fishing, riding, and, in fact, all kinds of out-door pleasures, were entered into. The beneficial effects were remarkable. She returned home full of good spirits, having gained flesh, sleeping—for her—very well, etc. Unfortunately, she returned to her home—a well-known malarial region—during an intensely hot and dry season; this, together with family cares, again prostrated her. She then went to a well-known sanitarium with but little, if any, benefit. "Rest cure," under the care of an eminent physician, although thoroughly tested, gave only negative results.

The second case is that of a young gentleman who from the same cause—over mental work—was completely prostrated. Suffering first from gravel, he was precipitated by his disease and purgatives administered to him by his physician into a long sickness, and chronic diarrhoea was added to his troubles. Friends thought he was dying from consumption, and his physicians shook their heads ominously. Depressed, melancholy to the verge of insanity, he was ordered to take a sea voyage. This cured his diarrhoea by that most efficient agent—rest. As he was nauseated to a slight extent during his voyage—three months—and so ate but a minimum amount of food, returning home thin, morose, but able to digest enough food to keep him in passable condition, he fortunately had offered him a position in a mountainous region, which gave him much out-door exercise, but little mental work, yet pleasantly interested him; and, at the same time, he was boarding at a cheerful home, together with several bright, congenial companions. His medicines were port wine, if needed to aid digestion, Huxham's tincture, and paregoric, if at any time diarrhoea—due to over-eating—threatened him.

Enough to say that when he returned to his old home, after six months' absence, several of his friends passed by him, not recognizing the healthy, robust, athletic-looking young gentleman as the dying friend of the year before.

The third and last case, that of a large, healthy woman, suddenly taken with vomiting. Of a hysterical nature, and having, as she asserted, seen her last sickness, pregnancy was not at first suspected as the cause. The attending physician, after a week or two, recognized the cause of the trouble—vomiting of pregnancy—but the family becoming anxious, consultations were held, medicines of every shape and form used, and the patient sustained by beef peptonoids administered by the bowel. As a dernier resort, before operative measures were resorted to, the husband

was told to take his wife out to drive every day, even though he was necessitated to have her carried to the carriage. Her vomiting ceased with the first ride. Why did it cease? Well, we can not always say why; but my explanation in this case would be that it ceased because after the first few weeks the vomiting was kept up simply from slight irritation, prostration, and despondency of the patient, who lay in bed and brooded. New sights, pleasurable sensations, another look at the outside world, braced, stimulated, and drew the patient out of herself, and she, by the best of medicines—pleasure—threw off her disease. I do not plead for excitement, but for pleasurable sights, enjoyment, companionship, and sufficient work of a kind suitable for the patient. But often our invalids are confined to bed; how shall we treat them? The patient under these conditions sees, or ought to see, but few persons. If they are prostrated enough to be necessitated to keep their beds, visitors, with few exceptions, should be excluded, and those allowed to enter the room stay but a short time—twenty minutes. I know a physician—a walking medical encyclopedia—who deservedly lost much of his practice, that he had suddenly been thrust into, by his habit of staying and talking an hour or even two hours, and that too often at bedtime, to the sick and distressed patient. Seeing only the family, nurse, and attending physician, how necessary it is that the family and nurse be impressed with the necessity of maintaining a pleasant demeanor, whatever be the cares oppressing them. In some families, where there is no higher motive, policy may be urged as a reason for pleasant, cheering words and looks; as we can assure them of the additional aid these are to restoration of health. As to the physician, I am more and more impressed with the common sense contained in a remark made to me by a physician with a large practice in the treatment of chronic diseases. He said that unless I had the power to impress my patients, to gain their confidence, and be able to cheer them when despondent, I had better give up that part of the practice of medicine. Many marvellous cures we read of are accomplished simply by the capacity the attending physician has, of infusing new life by his unvarying cheerfulness and strength of character.

But medicines—have medicines no part in this attempt to restore diseased organs? or have we arrived at that Utopian age when medicines are needed no more? Far be it from me to display such ignorance of the action of drugs as to believe such a fallacy. Do we not know that

quinine has almost a specific effect in intermittent and remittent?—mercury and potass. iod. in syphilis? Have we not had the pleasure of reducing temperature with aconite, relieving pain with opium, and purifying the system with calomel? and by properly handling these and other medicines, seeing our own patients resting quietly where before there had been pain, restlessness, intense thirst, sleeplessness, and, in other words, torment? As well might the astronomer look upon his telescope, which reveals innumerable worlds, and opens before us truths that, by their very magnitude, overpower—I say, as well might the astronomer count this wonderful instrument useless, because it does not penetrate the entire extent of space, as should we, as physicians, lose our faith in drugs, because, from our ignorance, we do not always get looked for results.

(To be continued.)

ELASTIC LIGATURE FOR UMBILICAL CORD.

BY J. M'F. GASTON, M. D.,
Of Atlanta, Ga.

In an article upon "The Innovations of Medical and Surgical Practice," that appeared in the MED. AND SURG. REPORTER of August 26, 1882, when treating of ligatures, I said, "it may be inferred that a simple elastic ring should prove adequate to the necessary constriction of the umbilical cord, thus obviating a not infrequent accident of secondary hemorrhage from the cutting of its soft substance by the ordinary mode of ligation." (Page 228, sixth line from the top.)

It is observed that this suggestion has been acted upon by Dr. J. J. Reid, of New York, who reports for the MEDICAL AND SURGICAL REPORTER, December 1, 1883, the application of an elastic rubber ring to the umbilical cord. As no reference is made to the indication for this mode of ligation which was published in the same journal more than a year previous to his announcement, it must be inferred as a remarkable coincidence when he states as follows:

"I have proved satisfactorily to myself that a fine, strong ligature tied as tight as possible with a surgeon's knot, and tied again and again in the same channel with the intention of causing as much pressure as possible, failed to prevent hemorrhage. I thus became convinced that to prove serviceable the ligature must be elastic to compensate for the shrinkage.

"The method I adopted was to carry in my pocket a piece of black rubber tubing of the kind and calibre ordinarily used for drainage purposes.

From the piece of tubing I cut off a ring about an eighth of an inch in length, and slip it on the prongs of a dressing forceps. The forceps is then opened and the umbilical cord grasped about two inches from its extremity. The rubber ring is then slipped down and over the fold of cord embraced by the forceps."

My attention was directed anew to this report by finding it noticed in *Gaillard's Journal* for March of the current year, and while the forceps adopted shows some ingenuity in getting a circular band around the cord before it is divided, it does not strike me as a very satisfactory mode of applying the elastic ligature.

Having by accident a small strip of India rubber with me when in attendance upon a case of labor on the 2d of June last, it occurred to me that an improvement upon the tubing belt was practicable, and I adopted the following expedient for an elastic ligature upon the umbilical cord. The undistended strip of caoutchouc measured about three inches in length, one-quarter of an inch in breadth, and one-sixteenth in thickness. In one end, at a distance of half an inch from the extremity, a longitudinal slit or incision was made by thrusting the blade of my penknife through the rubber. The strip was then passed in a loop around the umbilical cord, and the free end was thrust through the slit, being seized with the fingers of one hand, while the fingers of the other hand secured the opposite extremity of the rubber beyond the incision, and thus by drawing the strip tightly the circulation in the cord was stopped. When the strangulation reached the point desired a slight oblique incision on each side of the projecting portion of the strip afforded two shoulders that caught upon the lateral borders of the slit, so as to lock or clamp the loop around the umbilical cord. With the use of proper judgment as to the degree of constriction to be secured without risk of hemorrhage, and yet not endanger the substance included, a most efficient and convenient ligature is effected. The extremities of the elastic strip being cut of equal length, this fastening presents a neat and safe ligature. While the soft tissues of the cord undergo shrinkage and contraction, the close grasp of the elastic strip keeps up the constriction of its vessels so that no hemorrhage ensues, and still does not bind it so forcibly as to destroy or cut the tissues embraced in it. Armed with an elastic strip and a pair of scissors, the occlusion of the cord can thus be accomplished with dispatch, and more satisfactorily than with thread or tape.

I am aware that it has been thought by some to be unnecessary to ligate the umbilical cord, and it is observed in a report of the proceedings of the Louisville Medical Society of July 31st, that a statement is made by Julia Ingram, M. D., in treating of umbilical hemorrhage, that "there was some hemorrhages from the cord, *which according to the rule of the hospital was not ligated.*" (My italics.)

As there is an allusion subsequently to the maternity department of the New England Hospital, it is inferred that this is the institution referred to, and all the profession would be interested to have the details of this omission to ligate the umbilical cord, with the results.

A CASE OF HERMAPHRODITISM.

BY H. LASSING, M. D.,
Of New York.

Sara B., æt. 24, applied at the Eastern Dispensary for treatment, complaining of a burn on the chin caused by a caustic application made by some acquaintance to remove a strong hirsute growth. This beard on the face as strong as that on any male face, with the peculiarly marked masculine features and voice, attracted my attention, causing me to make a more thorough investigation, and finally a physical examination.

Her history was that she was a Russian Polish Jewess, married at the age of twenty years, but divorced from her husband because of her condition, not being able to allow him sexual intercourse; that she menstruated regularly, but that the menstrual flow proceeded only from the urethra when urinating, and not at any other time; that any attempt at sexual intercourse was accompanied by excruciating agony, the male member striking against something within her.

A physical examination showed a well-developed pomum Adami, ill-developed mammary glands, less even than generally found in the male, a masculine pelvis, and the general contour of the body that of a male.

The examination of the genital region revealed two well-developed labia majora with an ordinary clitoris, but anterior to this an erectile imperforate penis about one inch in length, but on irritation gradually enlarging and becoming erect, measuring then three and a half inches; the glans penis well developed and having a fair-sized prepuce capable of being pulled over and back, with a fissure in the glans, but no meatus. In the usual location, back of the clitoris, the urethra was found, but having the unusual diameter of one and a quarter inches, and a length of one inch

leading into an ordinary-sized female bladder, which in its upper anterior portion, about one-half inch from the inner opening of the urethra, had a canal of about one-quarter inch diameter by one inch length, leading upward and backward into an inch and a half long uterus. Further exploration in this direction was not possible. Beyond this urethra and behind the labia majora was a cul de sac through which anteriorly the bladder and uterus, and posteriorly the rectum could be felt, while upward and where the os uteri should be found, the bowels were felt through the extremely thin walls of the vaginal cul de sac. The feeling and appearance of the interior of this cul de sac was nothing like the glandular and vaginous feeling and appearance of the vagina, but was more like that of the outer surface of the bladder, and there was no vascularity apparent. Upon inquiry, the patient stated that the intercourse had always been attempted through the urethra, as the cul de sac replacing the vagina was only about two inches in length. The pain on attempted intercourse was evidently due to the stretching of the urethra. The menstrual flow evidently took place every four weeks, passing from the uterus through the before-described canal to the bladder, and out through the urethra during micturition.

The cause of the patient's anxiety to remove the beard was to enable her to obtain woman's work, the people of her race being afraid to trust her with female children. Inquiry of them was useless, as they never will divulge anything to Christians; but the patient stated that they would not employ her as a female, while as a male, though very robust and strong, she was not accustomed to work, nor could she wear male garments. The question among the gentlemen of the staff here who saw the case was, "What is it?" She refused to submit to any operative procedure, and I have not heard anything further from her since.

SOME WORKING FORMULÆ.

BY L. L. TODD M. D.,
Of Indianapolis, Ind.

Every physician who has gone his daily rounds for a score of years has found by experimental tests some few formulæ to which he pins his faith in a good many cases. They may not be novel, nor particularly original, but they are eminently useful.

The few formulæ I send have each of them proved of great value to me, several of them having been employed for more than twenty years. In this country, where myalgia, neuralgia, etc.,

are so frequently met, the class of remedies, as formulæ No. 1 and No. 6, are indispensable. No. 4—the fluid ext. of wahoo.—has proved with me, after very frequent use of it for twelve years past, a bronchial attenuant far superior to anything of the class; and lastly, the syphilitic R. (No. 7), although the dose of the bichloride ($\frac{1}{8}$ gr.) seems large, and especially when given conjointly with the iodide, still the remedy is invaluable, and has proved so with me when ordering formulæ, as bin-iodide, in $\frac{1}{2}$ -grain doses mercuric chloride, iodide potas., etc., in 20 to 40 grain doses, have entirely failed.

No. 1.—For muscular rheumatism, unattended by inflammation or sthenic condition and neuralgia, not accompanied by violent pain, the following has been employed by me for twenty-five years past with fewer failures in result than any other means:

R. Tinct. guiac. ammonia,
Tinct. cimicifuga racemosa,
Vin. colchici,
Tinct. gelseminum, or
Tinct. poke root, āā 3j. M.

S.—A teaspoonful in a wine-glass of well sweetened water at each meal time until the bowels are purged; after they become settled, use as at first.

No. 2.—For swelled testicle, as of the kind occurring in connection with gonorrhœa:

R. Fluid ext. belladonna, 3j.
Fluid ext. arnica, 3ij.
Fluid ext. opium, 3iss.
Water to make, Oj. M.

Apply on soft flannel, old linen, or muslin cloths, wrung out of hot water, till the pupils respond to the belladonna thoroughly.

No. 3.—Emulsion cod liver oil:

R. Best spirit whiskey or brandy.
Glycerin., āā 3iv.
Cod liver oil, 3vj.
Mucilage acaciæ (heavy), 3ij.
Oil cinnamon,
Oil nutmeg, āā drops xxx. M.

Tablespoonful three to five times daily.

No. 4.—Expectorant:

R. Fluid ext. Wahoo., 3vj.
Bicarb. potass., 3iiss.
Morphiæ sulph. gr. iij.
Fluid ext. ipecac.. drops xl. to lx.
Fluid ext. squill, 3iiss.
Syr. tolu to make 3vj. M.

S.—Teaspoonful every two or three hours.

No. 5.—For later stage of cough when fever has subsided, and no glazed condition or redness of tongue.

R. Fluid ext. wahoo., 3vj.
Spirits nitre, 3j.
Fluid ext. senega, 3j.
Sulph. morphine, grs. iij.
Syr. tolu to make 3vj. M.

No. 6.—For chronic or persistent ague:

R. Arsenious acid, grs. ij.

Strychnia sulp., grs. ij.
Sulp. quinine, 3j.
Querenes iron, 3j.
Ext. gentian, grs. xx. M.

Make pills xl. S.—One three times daily after eating.

The same formula with the strychnia and arsenic in from $\frac{1}{16}$ to $\frac{1}{32}$ of a grain, as needed, has been used for many years past as the most reliable remedy in chorea. Same mode of administering.

No. 7.—For syphilis:

R. Bichloride mercury, grs. iv.
Iodide potass., 3iv.
Fluid ext. stillingia,
“ “ sarsaparilla,
“ “ yellow dock,
Tinct. prickly ash, āā 3j. M.

S.—Teaspoonful after eating, three times daily.

HOSPITAL REPORTS.

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

BY WILLIAM GOODELL, M. D.,

Professor of Gynecology in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M. D.

Cauliflower Cancer of the Uterus.—Dysmenorrhœa Treated by Rapid Dilatation.

GENTLEMEN: This patient brings a note from her physician stating that she has a cauliflower cancer. This variety of cancer is rare, the more common form being the excavating one. More recoveries result from operating on the first form than from operations on the latter, as the branching cancer is usually isolated and the cancerous structure can more readily be gotten away. I have had a few cases of this kind, and I have never had a relapse in cases of true cauliflower cancer, that is, where the mass springs from a small stem. On examining per vaginam, I find that the physician is correct, and that we have the vegetating form of malignant disease. This involves the whole cervix.

I propose to operate on this, and shall in the first place scrape away as much as possible with my fingers. I do this as rapidly as possible, in order to avoid hemorrhage. If it is done slowly, the bleeding will be profuse. The vagina is not involved. To the right I find an old laceration of the cervix, which I believe is almost invariably found in these cases. I have now removed a large quantity of this friable material, and have left a funnel-shaped cavity in the cervix two inches in diameter. I now resort to the serrated curette, which makes a jagged wound, and thus diminishes the loss of blood. In order to check the flow of blood, I throw a little vinegar on this surface.

I expect this woman to begin to gain day after to-morrow, and to continue to improve. We shall not have a cure in this case, for the womb is too largely involved, and the disease has extended

beyond the neck. The operation will, however, do her an immense amount of good. These cases unfortunately come to the surgeon at too late a period. If they came earlier, there would be more chance of doing good.

Having scraped away as much as possible with the curette and forceps, I apply the Paquelin cautery. The advantage of the cautery is that it not only stops the bleeding, but also destroys the portions of the growth not removed by scraping. If this case were operated on outside of a hospital, I should plug the vagina, but in an institution of this kind I do not consider it to be necessary. If there should be bleeding, a pad of cotton soaked in vinegar will be passed into the vagina; on top of this a second, and possibly a third.

You see that she has the cancerous cachexia well developed. She is only thirty years old, which is an early age for cancer to appear. In the young the disease is liable to recur quickly.

Dysmenorrhœa Treated by Rapid Dilatation.

The next case which I bring before you is one of dysmenorrhœa. There are a number of forms of dysmenorrhœa. One of these is the nervous form. In nervous cases there is frequently spasm of various muscles of the body; thus there is a spasm of the sphincter ani, causing painful defecation; spasm of the muscles of the neck of the bladder, leading to irritable bladder; spasm of the heart, with the peculiar feeling as though the heart were coming out; spasm of the little fibres around the bronchial tubes, causing hysterical asthma; so there is sometimes a spasm of the muscular fibres about the neck of the womb, causing dysmenorrhœa.

Another form of dysmenorrhœa, and perhaps the most common, is that due to antelexion of the cervix, with stenosis of the cervical canal. The virgin womb is naturally antelexed, so that antelexion *per se* does not call for treatment. Antelexion with stenosis will, however, produce dysmenorrhœa, and the tendency of this form of painful menstruation is to go from bad to worse. A girl at puberty begins with dysmenorrhœa, and this continues and increases in severity, because the womb, in order to empty itself, has to become distended before it can straighten itself. If you have a piece of hose with a bend in it, the water will flow until it reaches the bend, but will stop there until the force behind becomes sufficient to straighten the tube, when it will escape. It is the same in these cases of antelexion. The womb becomes filled with blood, there is a culmination of pain which reaches its acme. Then there is a sudden gush, and the pain ceases for a time. This is mechanical dysmenorrhœa, and is the form in which dilatation is the operation. In hysterical and nervous dysmenorrhœa, I have frequently resorted to dilatation with immense benefit, just as I have in cases of irritable bladder.

I have performed this operation of overstretching the muscular fibres of the neck of the womb 168 times, and I have never had a serious symptom follow it. I have, however, had a few cases of local peritonitis follow it. My rule is to keep the patient in bed until all soreness has disappeared. Usually forty-eight hours is sufficient.

In the present case, the angulation is distinctly felt. In operating, I use two dilators, although a heavy one of the Ellinger pattern is sufficient. I

first introduce the speculum, and then pass the small dilator in order to tunnel the way for the larger instrument. Having stretched the canal to a certain extent, I pass in the large dilator, and gradually separate the blades to their full extent.

This looks like a rough operation. It is a painful operation, and cannot be done properly without ether. It is not a brilliant operation, like the cutting one; but, gentlemen, there is no comparison between the two so far as safety is concerned. The cutting operation has been followed by many deaths, many of which have never been reported. In a case like the present one, where a girl has dysmenorrhœa, incapacitating her for a few days each month, while at other times she enjoys tolerable health, the cutting operation is too serious. Again, the cutting operation is not as successful as dilatation. This stretching operation has been a very successful one in my hands. It is a rare thing to have to perform the operation a second time.

What harm may result from this operation? In two cases I have had laceration of the cervix. One occurred in a woman who had been treated with nitrate of silver for a number of years, and this produced stenosis of the canal. I made quite a tear, which caused considerable bleeding, which I checked with Monsel's solution. The other case was in a virgin in whom the cervix was very small. The instrument slipped out and made a tear of, perhaps, about half an inch on the left side. No bad consequences resulted from it, however. Another result which may follow the operation is peritonitis. I recall only one instance in which peritonitis reached any degree of severity. This was a case in which I dilated the cervix, and the woman went home the same day and went to work. I never expect to have any rise of temperature after this operation. Last week I performed this operation on a delicate, nervous girl, and had to keep her in bed for a week. There was not much elevation of temperature. When the operation is performed shortly before the menses are expected, it will bring them on; sometimes when it does not bring on the menses, it will produce a hemorrhage, or, I should rather say, a dribbling of blood, requiring, perhaps, one or two napkins per day. This is evidently due to a laceration higher up in the canal.

The improvement after an operation of this kind is usually very marked. I have had a number of cases which have become pregnant afterwards. This patient's next period, which is due in ten days, will be painful. This is owing to the injury and swelling caused by the operation. The next monthly may also be painful, but after that I expect decided improvement.

As you see, while I have been talking, I have left the dilator in position. My rule is to dilate to the fullest extent of the instrument, remove the ether, and wait until the woman begins to show signs that she feels the pain. I then remove the instrument. In order to relieve the pain, I introduce a suppository of one grain of aqueous extract of opium as I begin the operation. The nurse is given instructions to use one suppository every two hours, if it is necessary. Usually two are all that are required. We give but little food, and watch for soreness and elevation of temperature. If soreness appears, a poultice is applied.

If the temperature should rise above 102° , I might use some ice instead of the poultice. The patient will be kept in bed for 48 hours after the soreness has disappeared, and then she will be allowed to go home. I have done the operation in my office, and allowed the patient to go home; and although I know of no serious consequences following this course, I do not think it a wise one. I now operate where the patient can be put to bed.

I can recommend this operation to you as a most trustworthy one, and free from the dangers of the cutting operation. I should advise you to not perform the cutting operation, for there are other operations far less dangerous and much more efficacious.

I have kept a run of my operations for dilatation of the cervix. This was done because of the dispute in regard to the two operations, cutting and dilatation. I have operated on 162 cases, and in the vast majority there has been immense improvement, and in a large proportion there has been a positive cure, *i. e.*, there has been no return of the dysmenorrhoea. I have occasionally had to perform the operation a second time. After a few months, contraction takes place, but the cervix never returns to its original small size.

In reference to the time for performing the operation, I would say that if I do it for dysmenorrhoea, I operate a short time after menstruation has ceased; while if I do it for sterility, I operate a few days before menstruation is due. I then give instructions to the husband to cohabit with his wife immediately after menstruation ceases.

MEDICAL SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Thursday evening, June 26, 1884. The President, Dr. Tyson, in the chair.

Specimens from a Case of Resection of the Humerus.

Presented by Dr. Nancrede.

Mary D., *æt.* 17 years, from whom these specimens were removed, received a severe compound comminuted fracture of the left humerus by having her arm wound around the main shaft of a spinning-mill's machinery on January 2, 1884. She also at the same time received several severe scalp wounds. Irrigation with bichloride of mercury solution resulted in the salvation of the arm, although in the effort the girl nearly lost her life. At the end of six weeks no union having taken place, the ends of the fragments being necrotic, I cut down, removed the small fragments here presented, and after sawing off the ends of the main fragments, drilled and fastened them together with two stout silver wires. The whole extremity was then put up in a fixed apparatus of plaster, which was not disturbed until irritation of the skin from pressure, etc., required it. Now, at the expiration of about five months, the fragments seem firmly consolidated, with the line of the bone apparently perfect.

Microscopic Slides from a Case of Spindle-celled Sarcoma of the Breast.

Presented by Dr. G. De Schweinitz.

I desire to exhibit a few sections this evening

cut from a tumor of the breast removed by Dr. John Ashhurst, in the University Hospital. The history of the case in brief is as follows:

Annie S., married, aged 35, the mother of four children. Family history good. Her own health good until two years ago, when she began to suffer from malaria. The tumor of the breast first began to be manifest one year ago, and grew gradually without much pain until the late operation, when it had attained the size of an orange. There was no enlargement of the axillary glands. The nipple was not retracted. The growth to the touch was hard, and in spots the skin had become adherent, giving rise to "the pitted, somewhat brawny or lardaceous appearance," which is described by surgical writers as rather indicative of scirrhus of the breast. This appearance was sufficiently marked to cause the diagnosis of hard carcinoma to be suggested as probably correct. After removal, when the mass was laid open, both cut surfaces did not appear concave, as is usually the case in a scirrhus. Microscopic examination cleared up the diagnosis; for, as you will see by examining the specimens, they show the typical appearances of a small spindle-cell sarcoma. It seemed a good case to illustrate the difficulties sometimes encountered in correctly diagnosing tumors of the breast, and for this reason I have briefly placed it upon record.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated meeting, October 2, 1884, the President, R. A. Cleemann, M. D., in the chair.

Dr. B. F. Baer exhibited specimens from a case of

Submucous and Interstitial Fibro-Cystic Tumor of the Uterus, in which Hemorrhage was Absent.

Mrs. H., *æt.* 36 years, has had two children, the youngest being twelve years of age. Four years ago she suffered from severe metrorrhagia, which was caused by a submucous and interstitial fibroma of the uterus. This was removed, and after passing through a severe attack of peri-uterine inflammation, she recovered. After the removal of the growth her catamenial periods became regular in time and quantity, and she remained well until about one year ago, when she began to have a very fetid watery discharge in the intermenstrual periods, with sacral pain and uterine tenesmus. On July 17th, her physician, Dr. R. Armstrong, of Lock Haven, requested me to see her with him, when examination showed the cervix to be twice its normal size, with swollen and gaping lips, making the os and cervical canal quite patulous. The body of the uterus was as large as at the third month of gestation, but it was not symmetrically developed, being larger on the left than on the right side. The left broad ligament was indurated, and seemed to be the seat of an old inflammatory process. Pain had been present in this region since the operation. The sound met with an obstruction at the internal os and was deflected to the right, passing to a depth of nearly four inches. It could be made to pass around a mass of some kind in the cavity of the uterus, giving an indistinct sensation of the presence of an abnormal growth. I expressed the opinion, that although there had been no hemorrhage,

there was a submucous or polypoid fibroma present, and advised its removal. Seven tents were introduced, and twenty-four hours later ether was administered, when, with the assistance of Drs. Armstrong, Walls, and Ball, I proceeded to remove the tents and explore the uterine cavity. On passing my finger within the internal os, I detected a smooth, oval-shaped mass of tissue, resembling in consistency the inverted uterus enlarged to about double its normal size. I carried my finger up with some difficulty, and found the base or attachment of the tumor to be located at the fundus of the uterus, where it was narrowed somewhat, forming a sort of pedicle. The tumor felt rather soft for a fibroma, and this, together with its shape, caused me to suspect inversion of the uterus, and when I remembered that the organ is sometimes inverted by the operation for the removal of an interstitial fibroid, which requires great traction, as was necessary in this case four years previously, I became much more anxious to investigate fully before attempting to remove the mass. By very careful and thorough bi-manual manipulation, I convinced myself that the uterus was not inverted; there was no indentation anywhere on its surface. I therefore felt warranted in adjusting the wire of an écraseur around its attachment, and proceeded to tighten it; but the traction and manipulation which were necessary in placing the noose broke the surface of the tumor and exposed a peculiar-looking membrane, which resembled the peritoneum. I was alarmed at this, fearing that I had really to deal with a partially inverted womb, and that the smooth membranous surface was the peritoneum. I removed the écraseur, the wire of which had broken, and then passed one finger into the bladder and another into the rectum, for the purpose of determining more certainly the condition of the peritoneal surface of the uterus. Now, while an assistant made traction on the supposed tumor, I was enabled to satisfy myself fully that the organ was not inverted. I then removed the tumor by enucleation.

As you will see in the specimen which I present, there are a number of cysts. These cysts contained the semi-opaque coagulable fluid usually found in fibro-cysts, and gave to the tumor its softness, which, together with its shape and the appearance of the cyst walls when its surface was broken, made it resemble an inverted uterus. The patient made a good recovery.

The case is very unusual, for the reason that although the uterine cavity was distended by a large submucous tumor, which was becoming polypoid, not the slightest hemorrhage resulted. I do not remember to have met with a similar case. I have, however, met with cases of small polypi where there was no hemorrhage; two, indeed, were discovered after the menopause had been fully established and are worthy of record because of the reflex symptoms which they seemed to induce.

Uterine Polypus in which Hemorrhage was Absent, but which Gave Rise to Symptoms of Pregnancy.

Mrs. C. was forty-six years of age; she had been married twenty years, but had never been pregnant. The menopause had occurred one year previous to the date at which I saw her. Soon

after the cessation of the catamenia her abdomen began to enlarge, and she thought she was pregnant. Various irregular reflex symptoms of pregnancy developed, and she became so convinced that she engaged the services of an accoucheur and nurse, and went into labor in due time. Her physician, my friend Dr. John H. Musser, was unable to discover the least physical sign of gestation, nor anything else which should give rise to the almost perfect labor-like pains which she seemed to have at irregular intervals. He informed her that she was not pregnant. She became indignant and asked him to call another physician to confirm what he said. He consented, and requested me to see the patient. I excluded pregnancy, but found in the cervical canal a fibrous polypus not larger than an ordinary marble. This I at once removed, and the pains and other signs of gestation immediately subsided.

This was one of those cases of spurious pregnancy which we sometimes see developed in a sterile woman about the period of the menopause. The desire for offspring is strong. The cessation of the menses starts the delusion, and it is kept in existence and made to grow by being constantly fed by a morbidly susceptible nervous system. But there was a local irritation here to account for the reflex symptoms of gestation, as I believe there is in the majority of these rare and interesting cases. It is three years since this patient was under treatment, and there has been no return of the reflex disturbance.

The other case to which I wished to refer occurred in the practice of my friend Dr. B. Trautman, who kindly asked me to see the patient with him.

Uterine Polypus in which Hemorrhage was Absent, but which Seemed to Induce Severe Reflex Head Symptoms.

Mrs. K., æt. 52 years, has had two children, the youngest being twenty-five years of age. The menopause had occurred four years previously, and she did not complain of the slightest local symptom of uterine disease; but the flushings and other manifestations which often attend this period had not yet subsided. The disturbances, however, which concerned her most, and for which she consulted the doctor, were a pain and pressure of a very aggravated form on the top of the head. Many remedies had been prescribed for the relief of this, but with only temporary benefit. A uterine examination was made, and a polypus resembling in size a small walnut discovered in the canal of the cervix. This was removed some months ago, and I believe the patient has been relieved of the headache and other reflex symptoms which seemed to result from its presence.

The influence which these small growths have on the nervous system is something remarkable; but the absence of hemorrhage, especially in the first case, is more notable when we recall its size and location, and remember that death has resulted from hemorrhage caused by polypi not larger than a pea, as recorded by Locock, Klob, Courty, and others. I have no doubt some of you can recall cases, as I can, where death would doubtless have resulted from the hemorrhage produced by a small polypus, had not the cause of it

been removed. The following is an illustrative case :

Uterine Polypus Attended with Great Hemorrhage.

Mrs. P. consulted me on September 20, 1883. She was 30 years of age, and had been married eight years, but had been sterile. Two years ago she began to suffer from menorrhagia with uterine tenesmus. Soon after she lost blood at irregular intervals and in large quantities ; during the past year she had not often been free from metrorrhagia or a profuse and offensive leucorrhœa. The hemorrhage would sometimes last a whole month continuously, and leave her so prostrated and anemic that it was thought she could not rally. She had lost thirty pounds in weight, and was blanched in appearance.

I will confess that I was surprised to find, on examination, that my patient had a polypus not larger than a Concord grape, but the mucous membrane of the cavity of the uterus was hypertrophied and granular. The pedicle was attached far up in the cavity of the uterus. The tumor was removed by means of the curette. The patient now menstruated regularly. This case contrasts strongly with the three others in its hemorrhagic character, and it presents the history commonly met with in these growths. There is no doubt that the location of the tumor has great influence in the causation of hemorrhage in these cases—much greater than the size of the growth ; but much also depends upon its histological character and the condition of the endometrium. Thus when a fibroid tumor or polypus is situated in the cavity of the uterus proper, more hemorrhage is likely to result than when it grows from the tissues of the cervix, because if located in the former position, it is often of the muscular variety, and therefore more vascular, and the mucous membrane of the uterine cavity, which is the direct source of the hemorrhage, is usually hypertrophic and granular, as in the last case narrated. Moreover, when the cavity of the uterus is the seat of a polypus, the uterine and pelvic circulation is stimulated by its presence, somewhat in the manner in which it is affected by the presence of a fecundated ovum which has been blighted ; it is a foreign body, and the uterus tries to expel it, but by the effort the circulation is excited in that direction, and hemorrhage results. My first case, however, furnishes an exception to the rule that hemorrhage attends when the tumor occupies the uterine cavity ; but as tenesmus was present, it is possible that hemorrhage might have occurred later had the tumor been allowed to remain.

Dr. Goodell remarked that the question of hemorrhage in polypi is a curious one. It seems less likely when the tumor is in the body of the uterus, and checks the amount of circulation by existing tonic contractions, than when it is protruding into the vagina like the clapper of a bell. In one case, where the hemorrhage had produced extreme anemia, dialyzed iron was given to relieve the anemia, and it also checked the hemorrhage. In another case, operation was refused, and death resulted from hemorrhage three days after the visit.

Rapid Dilatation of the Uterine Canal.

By Wm. Goodell, M. D.

For many years I enlarged or straightened the uterine canal, according to the requirements of the case, either by tents or by Sims's operation, preferably by the former. Having had several serious warnings in the shape of inflammation following these operations, I began to perform them with fear and trembling. Yet nothing very untoward happened until the year 1878, when two grievous mishaps befell me.

A charming young lady, the centre of a large circle of admiring friends, came from a neighboring State to consult me about a dysmenorrhœa which grew worse and worse every year. The cervix was so bent forward, and the stenosis of its canal *per se*, as well as by angulation, was so marked, that I unhesitatingly performed Sims's operation. Within a few days septicæmia set in, soon the parotid glands swelled up, and on the ninth day she died. True it is that, at the same time, two piles also were tied ; but this latter operation I had and have performed so many times with impunity, that I was, and am still, disposed to attribute the blood-poisoning to traumatism of the cervix, and not to that of the rectum. Hardly had I time to recover from this bitter blow, when a case of exhausting menorrhagia fell into my hands. The lady was the young bride of a husband well advanced in life, who dotes on her as only old men dote on much younger wives. I dilated the cervical canal with tents, and curetted many vegetations from the endometrium. A furious peritonitis set in, and in less than three days this young wife lay dead, and the husband was frantic with grief.

The anguish which I felt at the death of these two ladies, and the heart-rending scenes which I witnessed at their bedsides—scenes which I cannot now recall without emotion—urged me to try any remedy that gave promise of efficiency, combined with greater safety. In the search for a substitute, I tried rapid dilatation, which Ellinger and others had proposed, and since that year—that *annus iræ*—I have not once performed Sims's operation for dysmenorrhœa, and I have so narrowed the field for the use of tents, that I now very rarely resort to them. In short, rapid dilatation has proved, in my hands, so safe and so efficient an operation, that I wish to urge its claims before this society.

The instruments which I would recommend are two Ellinger dilators of different sizes. These are the best, on account of the parallel action of their blades. The smaller of these dilators has slender blades, and it pilots the way for the other, which is more powerful, and with blades that do not feather. I have had the beaks of these dilators changed from an obtuse angle to a slight curve, so that it can be reversed within the womb. The lighter instrument needs only a ratchet in the handles, but the stronger one should have a screw with which to bring the handles together. Let the beak should hit the fundus uteri and seriously injure it when the instrument is opened, the blades are made no longer than two inches, and are armed with a shoulder, which prevents further penetration. The larger instrument opens to an outside width of one and a half inches, and it has a graduated arc in the handles by which the divergence of the blades can be read off. The instruments which I now exhibit to you, and

which I can recommend highly, have been made under my supervision by Messrs. J. H. Gemrig & Son, of this city.

In a case of dysmenorrhœa or of sterility from flexion or from stenosis, my mode of performing the operation of rapid dilatation is as follows: The patient is thoroughly anesthetized, and a suppository containing one grain of the aqueous extract of opium is slipped into the rectum. She is then placed on her back and drawn to the edge of the bed, the knees being supported by her nurse. The light must be good, so that the operator may clearly see what he is about. By the aid of a strong tenaculum, applied through my bivalve speculum, the cervix is steadied and the smaller dilator is introduced as far as it will go. Upon gently stretching open that portion of the canal which it occupies, the stricture above so yields that when the instrument is closed it can be made to pass up higher. Thus by repetitions of this manœuvre, little by little, in a few minutes' time a cervical canal is tunneled out, which before could not admit the finest probe. Should the os externum be a mere pin-hole, or be too small to admit the beak of the dilator, it is enlarged by the closed blades of a straight pair of scissors, which are introduced with a boring motion. As soon as the cavity of the womb is gained, the handles are brought together. The small dilator being now withdrawn, the larger one is introduced, and the handles are then slowly screwed together. If the flexion be very marked, this instrument, after being withdrawn, should be reintroduced with its curve reversed to that of the flexion, and the final dilatation then made. But in doing this, the operator must take good care not to rotate the womb on its axis, and not to mistake the twist for a reversal of flexion. The ether is now withheld, and the dilator kept *in situ* until the patient begins to flinch, when the instrument is closed and removed. A few drops of blood trickle out of the os. Occasionally a slight flow of blood will last for several days after the operation, simulating the menstrual flux. Often this flux is precipitated or renewed if the operation follows or precedes it too soon. The best time for dilatation is, therefore, midway between two monthly periods.

When compared with the cutting operation, this one looks like rough usage; yet the woman rarely needs more than two or three suppositories, and complains merely of soreness for one or two days. To forestall any tendency to metritis, she is kept in bed until all tenderness has disappeared. Pain is met by rectal suppositories of opium, and by large poultices laid over the abdomen. I have seen slight pelvic disturbance arise from this operation, but it has always been readily controlled, and has not given alarm.

In the great majority of cases I dilate the canal, not to the fullest capacity of the instrument, but to one and a quarter inches. Sometimes in an infantile cervix, which does not readily yield and might give way, the handles are not screwed down more than three-quarters of an inch or an inch. Tearing of the cervix has happened in two of my cases. In one, that of a virgin, the cervix was split half way down to the vaginal junction. The other case was that of a multipara, whose uterine canal had been nearly closed

up by applications of silver nitrate, made by her physician with the view of curing what he supposed was an "ulceration of the os," but which was a bilateral laceration. The tissues rendered cicatricial and brittle by the caustic were torn by the dilator for about half an inch on the right side also. Here the hemorrhage was free enough to need styptic applications and a tampon. I could have stopped it by wire sutures, but this was not done as it would have defeated the object of the operation.

For slight dilatations, such as for the office treatment of antelexions and of stenosis or for the introduction of the curette, or of the applicator armed with cotton, the more delicate instrument is strong enough, and an anæsthetic is not needed. Sometimes in a very antelexed womb, the dilator cannot be made to pass the os internum. This difficulty is overcome by first passing in a surgeon's probe, and then along it, as a guide, the dilator.

After a forcible dilatation under ether, the cervical canal rarely returns to its previously angular or contracted condition. Since lateral extension of elastic bodies antagonizes their length, the cervix shortens and widens; and the plasma provisionally thrown out by the submucous lesions sustained by the dilated part serves still further to thicken and stiffen its tissues. In other words, the stem-like neck of the pear-shaped womb is shortened, widened, strengthened, and straightened. Hence, for straightening out antelexed or congenitally retroflexed wombs, and for dilating and shortening the canal in cases of sterility or dysmenorrhœa, arising from stenosis or from a conical cervix, the dilator will be found a most efficient instrument. In its results it is not infallible; I have twice been obliged to repeat the operation, and would like to have done so in several other cases, had the woman permitted it. In a very few instances I have been forced, as a final resort, to nick a pin-hole os-externum; but I had not then learned how far I could safely stretch open the uterine canal, and the operation of dilatation was not so efficiently performed by me as it is now through a larger and riper experience.

But it is not to cases of dysmenorrhœa that I limit the operation of rapid dilatation. As I stated before, I use it to stretch open the canal for the admission of the curette and of spongetents, or for the purpose of making applications to the uterine cavity. I first dilate the canal with this instrument, and introduce the nozzle of the syringe between the separated blades. This gives a free avenue for the escape of the liquid, and robs of its dangers this form of intra-uterine medication. I also resort to the dilator in order to explore the womb with the finger. For instance, in any given case of menorrhagia in which a polypus or some other uterine growth is suspected, instead of using tents, I put the woman under an anæsthetic, and after the rapid dilatation of the cervical canal to the utmost capacity of the instrument, viz., one and a half inches, am enabled to pass my finger up to the fundus. This is accomplished either by drawing down and steadying the womb by a Volvella forceps; or in thin subjects by forcing the womb down upon the finger through supra-pubic press-

ure on its fundus. In this way I have over and over again at one sitting discovered a uterine growth, twisted it off, and removed it. Usually in these cases I experience more difficulty in removing the polypus or other growth through the small canal, than in twisting it off from its uterine attachment. It often has to be wire-drawn before it can be removed, and sometimes the os uteri has needed a few nicks. Usually, when the menorrhagia is free, the cervical tissue is so lax that there is no difficulty in the introduction of the index finger up to the fundus, but sometimes only its tip can be made to pass the os internum. Yet even this limited degree of penetration is commonly quite enough to decide the presence of an inside growth. If it is not enough, I invariably search for a growth with a small pair of fenestrated forceps, and I have repeatedly seized and removed one, the existence of which was merely suspected. After such operations, the uterine cavity is thoroughly washed out with a solution of carbolic acid or of potassium permanganate.

I am sorry to say that I have not kept full records of all cases of rapid dilatation. For instance, I have never recorded those office cases of dilatation in which ether was not given. Nor has any note been made of cases in which dilatation was performed under ether for curetting, for digital exploration of the endometrium, or for the removal of uterine growths. I have tabulated merely cases of dysmenorrhœa in single or married women. In the unmarried, with but three exceptions, which will be noted, painful menstruation was accompanied by sterility.

Including all the cases of dilatation performed under ether, I must have had over three hundred. I have limited myself to these cases because the use of an anæsthetic implies full dilatation—one in which serious injury, if ever, would most likely be sustained. Yet there has not been a death or a case even of severe inflammation in my practice, and the results have been most satisfactory—far more so than when the cutting operation was performed by me. The following are the statistics of my cases of dysmenorrhœa: Unmarried, 80; married, 88—168. Of the unmarried eighteen were unheard from after the operation, leaving sixty-two from which any data could be obtained. Of these, thirty-eight were cured, seventeen more or less improved, and seven not improved at all. Of these seven that were not benefited by the operation, five subsequently had their ovaries removed, one of them by another physician, and four by myself; of the latter, one died. In each one the ovaries had become so altered by cystic or by interstitial degeneration, as to make the dysmenorrhœa otherwise incurable. Of the seventeen improved, there was one on whom oöphorectomy was also performed; for although the dysmenorrhœa was greatly relieved by dilatation, ovarian insanity and menorrhagia were not. The operation was a successful one, and my patient was not only cured of her hemorrhages, but she regained her reason. Out of these cases, the majority, although not wholly cured, were greatly improved. For example, one of them was formerly bed-ridden during the whole period of her menstrual flux, and had then to take large doses of morphia. She also suffered at those times from hematemesia and epi-

staxis. Since the operation she experiences pain for merely two hours, needs no anodyne, and has lost her ectopic hemorrhages. Her gain in health and flesh has been great. Another one, who was wholly crippled by her suffering and made nervous by the dread of them, is now a busy nurse. For one hour at every period she suffers a great deal, but she is too much afraid of taking ether to have a second dilatation performed.

Of those cured, two had Sims's operation performed previously without benefit, and were afterwards dilated; two were dilated twice before a cure could be brought about. The history of several cases merits more than a mere allusion. The sufferings of one of my patients at every monthly period had always been great; but while she was at a boarding-school they grew so intense as to cause furious delirium at those times. This finally developed into permanent insanity, with suicidal impulses. While in this condition, she was placed in my hands. After rapid dilatation of the cervical canal, the dysmenorrhœa wholly disappeared. The exemption from pain toned down some of her more extravagant delusions, but she did not wholly regain her reason until a few months afterwards. She is now free from all menstrual pain and in the complete possession of her mental faculties.

A Hebrew lady, whose health had suffered from dreadful dysmenorrhœa, was improved so much at one sitting that her physician and friends were amazed. Not long afterward he asked me to perform the same operation upon another one of his patients, who was, if anything, worse. Her sufferings were so intense that he wrote: "I fear that another period might kill her," and urged an immediate operation. The cervix in this case was conical and very dense. Fearing a tearing of the parts I screwed the instrument slowly up to one and a quarter inches, and kept up this amount of dilatation for some twenty minutes. The cervix sustained no injury. The canal has since remained patulous, and she is free from all menstrual pain.

Of the married, fifty-three were heard from. Of these, thirty-nine were cured, ten improved, and four unimproved. Out of these fifty-three cases, nine were not in a condition to conceive, three of them from fibroid tumor, two from destructive applications of nitrate of silver to a lacerated cervix; three from being over forty-one years of age, and one from being a widow. This leaves but forty-four capable of conception, and of these, eight, or a little over eighteen per cent., became pregnant. But the ratio is, in fact, larger, for several of my patients, fearing pregnancy, employed preventive measures after the operation. Then, again, I believe that others who consulted me merely for painful menstruation have not reported their subsequent pregnancies. For instance, two months ago I learned, through the merest accident, that the wife of a clergyman, whose cervical canal I dilated six years ago, has since been making up for lost time by giving birth to twins within a year after the operation, and later to several other children. She had been married eight years before she came to me and had had her cervical canal dilated by tents, and slit up with Peaslee's metrotome by a skillful surgeon: I have also had several cases of preg-

nancy following office-dilatations of the uterine canal, in which ether was not given, and consequently the lumen of the canal was not much enlarged. But such slight operations were not

deemed worthy of record, and they, therefore, have no statistical value.

(To be continued.)

EDITORIAL DEPARTMENT.

PERISCOPE.

Operative Treatment of Malignant Affections of the Rectum.

Before the late International Medical Congress (*Brit. Med. Jour.*, August 24, 1884), Professor Esmarch (Kiel) read a paper on this subject, in which he laid down the following propositions:

1. In the treatment of cancer of the rectum, the same principles hold good as in the treatment of cancer of other parts of the body.
2. Extirpation should be as early and as complete as possible.
3. The more the surrounding healthy parts are removed with the diseased, the greater reason is there for hoping that recurrence will not take place at all, or will be long delayed.
4. Experience teaches that early and thorough extirpation may be followed by permanent recovery.
5. As, in cancer of the rectum, the lymphatic glands are secondarily affected at a comparatively late period, operation may be followed by permanent success when the disease has lasted some time and has become extensive. (Czerny observed recoveries which lasted above four years, although the cancer had been present three or four years.
6. The prognosis in regard to return of the disease is good in proportion to the slow development of the new growth, the delay in the appearance of distressing symptoms, and the completeness of the operation.
7. The simple cylinder-celled cancers (destructive adenoma and adeno-carcinoma), which proceed from the more superficial layers of the mucous membrane, generally give a better prognosis than the forms with small alveoli and the gelatinous forms, which more rapidly enter the deep submucous layers. The greater the disposition to gelatinous degeneration of the cancer, the more malignant, usually, is its course.
8. Extirpation of a cancerous nodule from the wall of the rectum is sufficient only when the nodule is well circumscribed and movable, and when only a part of the wall of the rectum or of the anus is implicated.
9. In all other cases, amputation of the rectum beyond the points of the growth is indicated.
10. The entire rectum, as far as the sigmoid flexure, may be removed with good result.
11. The principal dangers of the operation are, *a*, hemorrhage; *b*, acute, purulent, and ichorous inflammation of the connective tissue (septic lymphangitis, retroperitonitis, and peritonitis).
12. These dangers are to be combated: *a*, by very careful hemostasis during the operation; *b*, by very careful primary disinfection, and pro-

vision for the free escape of the secretions of the wound (by drainage and the avoidance of cavities).

13. In amputation of the rectum high up, opening of the peritoneal cavity is unavoidable; but peritonitis does not generally follow, if the opening be at once closed by suture under strict antiseptic precautions. Drainage of the peritoneal cavity is indicated only in exceptional cases (for instance, where considerable soiling of the peritoneum, during the operation, cannot be avoided).

14. The progress of operative skill has essentially diminished the dangers of the operation, the death-rate having fallen from 50 to 20 per cent., and even lower; and it is to be expected, with confidence, that this proportion will become even more favorable, as in ovariectomy, hysterectomy, etc.

15. The functional disturbance following amputation of the rectum is slight in comparison with the distress caused by the cancer. Incontinence of feces is not complete, especially when the external sphincter has not been removed. Systematic cleanliness, and the use of a suitable apparatus for closure, commonly relieve the difficulty.

16. Resection of a portion of the intestinal tube in its whole circumference, followed by suture of the two ends of the intestine, is not to be recommended, since the lower portion of intestine generally sloughs. It is better to remove the mucous membrane of the lower end, preserving the external sphincter muscle, and to fasten the upper end of the amputated rectum by a few sutures to the lower edge of the wound.

17. Extirpation of cancer of the rectum is, in all cases, rendered easier by dividing the posterior wall of the gut as far as the coccyx. Removal of the coccyx is generally unnecessary.

Prof. Verneuil (Paris) had done his first colotomy thirty years ago, and his first extirpation fifteen years ago. He at once found that removal of the disease was impossible. The patients objected or refused in many cases to allow the performance of colotomy. He then found that division of the cancerous stricture removed all complications, and gave all the other advantages of colotomy. The whole length of the stricture must be split. The incision was made from the tip of the coccyx, by a thermal cauterium plunged in to meet the tip of the finger hooked above the stricture. Through this channel, by a cannula, if necessary, an *écraseur-chain* was passed, and the rest of the division was completed. No blood was ever lost, and the symptoms at once ceased. No deaths followed.

Professor Trélat (Paris) denied the advantage claimed for the rectal extirpation, and pointed out the rapidity and malignity of recurrence. He quoted one case which, he said, was the type of

many, where the removal of the cancer early, and when extremely small, was followed by a speedy and malignant recurrence. In one case he found, though the operation was normal and extra-peritoneal, that he had the small intestine in the artificial anus; and the patient died. He laid stress upon the color of the intestine as the only point of recognition that did not deceive, being white, or greyish-white.

Mr. Sampson Gamgee (Manchester) preferred the operation of inguinal colotomy, while admitting that other operations had their indications, and that no one could prevail to the exclusion of others.

Mr. Marshall (London) mentioned some cases where sinuses had been kept open in the peritoneum by tangle-tents.

Prof. Volkmann (Halle) observed that colotomy, even in Mr. Bryant's hands, was a very dangerous operation; and that the statistics of extirpation were better than those of colotomy, according to Bryant. Cancers, he said, varied in rapidity and malignancy according to their locality; and in the rectum they had little tendency to infiltrate early and recur soon. Even in desperate cases, he had no return under long periods; in one case, not for ten years. The results of excision of the rectum had improved, and would go on doing so with improved methods. Asepsis and disinfection were normally powerful when the peritoneum was not opened; but, when this was opened, the dangers were great, and cleansing difficult. But, dangerous as extirpation was, it was not so bad as colotomy; and recurrences were painless, and not troublesome. The comfort of patients was also infinitely greater than it was after colotomy, discomfort being hardly felt, save in diarrhoea. The selection of the cases, he went on to say, was also important; and he did not operate in any case where he could not reach the upper end of the disease by bimanual exploration under anaesthesia. The incision should be both forwards and back to the coccyx, the anus alone being left; and no attempt should be made to unite the upper with the lower end, which should be stitched well down, and the cavities at the sides well drained.

Prof. Kuester (Berlin) said that, in extirpation, he always applied sutures when the peritoneum had been opened. Cauterization was a proceeding from which good results were got in most of the cases where a permanent cure could not be expected. He would select either this or extirpation; very seldom colotomy.

Cocaine Hydrochlorate (the New Local Anæsthetic).

Dr. J. Herbert Claiborne thus writes in the *New York Med. Jour.*, October 25, 1884:

The patients whose cases are herewith reported, in which the new local anæsthetic—the hydrochlorate of cocaine—was used, were operated on by Professor Gruening, before the eye class of the New York Polyclinic, at Mount Sinai Hospital:

Case 1. A colored woman, aged forty-five years, with double over-mature cataract, was placed upon the operating-table, and three drops of a two per cent. solution of cocaine hydrochlorate were instilled into each eye every five minutes for fifteen

minutes. Twenty minutes after the first installation the speculum was introduced into the right eye, the conjunctiva was seized with a fixation-forceps, and a large section was made with von Graefe's cataract-knife, without any shrinking or expression of pain on the part of the patient. While the iridectomy was being done, she winced and gave a slight expression of pain. The left eye was then operated upon with equally satisfactory results, but the pain of the iridectomy seemed less in the left than in the right eye.

Case 2. The patient was a German, fifty years old, with glaucoma of the right eye, attended with excessive tension and ciliary staphyloma. He was blind in the glaucomatous eye. Four drops of the same solution as had been used in Case 1 were instilled into the right eye every five minutes for twenty minutes. Thirty minutes after the first installation, the sound eye being uncovered, the speculum was introduced and the fixation forceps applied. The patient objected strenuously to the speculum; in fact, squeezed it out, and shrank from the application of the forceps. A pad of borated cotton was then placed over the sound eye, the speculum was introduced, the fixation-forceps was applied, and the section was made, without any expression of pain from the patient. Immediately before the second attempt, four more drops of the solution were instilled into the eye. The iridectomy, in this case also, was attended with pain.

In Dr. Gruening's office, after the instillation of two drops of a two-per-cent. solution, a foreign body was removed from the cornea of a hyperæsthetic man, without pain.

In a case of episcleritis, after an instillation of the same sort, there was marked diminution of sensibility in the conjunctiva, although there was still pain on massage.

In the first three instances the hydrochlorate of cocaine certainly accomplished all that has been asserted for it, viz., anaesthesia of the conjunctiva and cornea. In the case of episcleritis, the anaesthesia, although marked, was not so complete as in the other cases. Whether or not its anæsthetic effect is always diminished in the case of the tissues mentioned when they are in pathological condition, remains to be seen.

In the case of the woman with cataract, there was less pain caused by the iridectomy in the left eye than in the right; and the left eye, as has been stated, was the second one to be operated on.

It is possible that the anæsthetic effect of the drug might, by imbibition of the solution, have reached the iris tissue in the left eye, as there had been an opportunity for absorption to go on for a long time.

The solution used in these cases was made by Eimer & Almond, of New York.

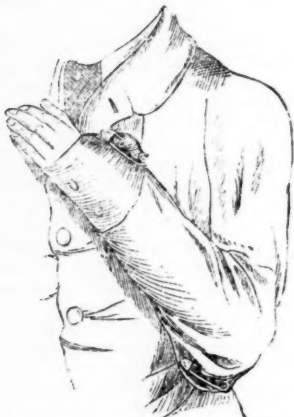
The honor for this new and brilliant addition to ophthalmology is due to Dr. Koller, of Vienna, a young man who is still pursuing his studies in that city.

A Pin Sling.

Dr. Sampson Gamgee thus writes in the *Lancet*, September 27, 1884:

A gentleman consulted me the other day, for a

painful condition of the tip of his left little finger. To secure the benefit of physiological position and immobility, I bent the elbow at an acute angle and raised the hand; then, pinching up the sleeve at the wrist, fixed it to the coat by a strong safety-pin; with another I attached a fold of the sleeve to the coat just under the elbow. Rest was absolute; the finger waxed pale and easy; and my patient went to his office duties in comparative comfort.



Even if an ordinary sling be at hand, the process of fixing the forearm at an acute angle is not quite simple; and the resulting unsightliness is often unpleasant. For clearness, the sketch shows the pins; but with a little contrivance a pin sling may be made invisible. A third pin, fixing the inside of the arm sleeve to the body of the coat, adds greatly to immobility. In this position I have found one pin very useful, in steadying the shoulder of a young lady who had it dislocated three times. She had barely recovered from the last accident, when she was very anxious to go to a ball. By fixing, with a safety-pin, the inside of the sleeve to the bodice, a trusty, yet invisible, checkmate was provided, allowing freedom of hand, but barring abduction. These are trifles, only noted apologetically, because *pro re nata* they may be useful.

Muriate of Cocaine in Gynecology.

In the *Medical Record*, November 1, 1884, Dr. W. M. Polk says:

As a matter of some interest, just at this time, I give the results obtained with hydrochlorate of cocaine in two cases of trachelorrhaphy done this afternoon (October 29, 1884).

Case 1. *Double laceration of the cervix uteri, extending on both sides to cervico-vaginal junction.*—The vagina was first washed with a warm-water douche, then the cervix, the patulous cervical canal, and the vaginal walls adjoining the cervix were carefully washed with Castile soap, this in turn was washed off, and the surface carefully dried. Next a four per cent. solution was painted over the cervix, in the canal, and over the adjacent vaginal wall with a camel's-hair brush. This

was repeated twice, at intervals of two or three minutes, making three applications of the drug. Within three minutes of the last application the operation was begun.

It required the removal of extensive pieces of cicatricial tissue from each angle, making it an elaborate operation of its kind. The time consumed was about forty minutes, the patient made no complaint and suffered no pain till the last ten minutes of the procedure, then she spoke of her discomfort as being a sense of soreness rather than acute pain.

Thinking that the case might be one of those in which the normal sensitiveness of the region was not great, consequently one that might have borne the operation without the use of any anæsthetic, local or general, I chose a second.

Case 2. The woman was one having less self-control than the first, and with a good deal of normal sensitiveness about the uterus and vagina. The preparation of the region and the application of the anæsthetic was the same as in case 1.

No pain was felt till the lapse of about twenty minutes, then it was so acute as to require an application of the solution of cocaine, making in her the fourth. In three minutes the operation was continued and soon completed without further pain. This last application was made directly to the cut surfaces, first freeing them from blood.

The patient, who three years ago had had the same operation performed under ether, was asked which method she preferred, that with ether or this last without; she promptly replied, this last.

In the first case the effect of the drug seemed to be, that it not only blunted sensibility, but it appeared to retard the first appearance of blood upon the cut surface.

These cases I offer as a contribution to the solution of the question now so prominently before the profession—the place to be held by hydrochlorate of cocaine as a local anæsthetic. With a view of testing its value in obstetric practice a series of observations are being made in the Emergency Hospital, the solution being applied to the cervix and upper part of the vagina during the severe pains of the first stage of labor. The result I beg leave to communicate to you when the number of cases is large enough to make the report valuable.

REVIEWS AND BOOK NOTICES.

NOTES ON CURRENT MEDICAL LITERATURE.

—Dr. C. W. Dulles has performed a useful task in discriminating between hydrophobia and the disorders which are mistaken for it. He has routed a piece of popular superstition among the profession, for good and all, we hope. (Reprint from the *Trans. of the Pa. Med. Soc.*)

—An instance of obstinate cough due to nasal polypi forms the subject of an instructive paper by Dr. John N. Mackenzie, of Baltimore. (From the *Trans. of the Med. and Chirurg. Faculty of Md.*)

The same writer, in a reprint from the *Medical Record*, urges a treatment of hay-fever by operative procedures, which, he claims, "will relieve all and cure a large proportion of the patients."

—The pathology of the diseases of the nerve centres, especially epilepsy, and their proper treatment, is the topic of a thoughtful essay by Dr. J. M. Gaston, of Atlanta, Ga., in a reprint sent us. His views are evidently the result of a thoughtful study of the subject, and merit close consideration.

—G. P. Putnam's Sons will shortly publish, by arrangement with the Vienna publisher, a translation, prepared by Dr. Barney Sachs, with the authorization of the author, of Dr. Meynerts Treatise on Psychiatrie. The first part of the work, devoted to the anatomy and physiology of the brain, the publishers hope to have ready by the beginning of the new year. The work will be fully illustrated.

—In a paper before us, Dr. H. v. Sweringen, of Fort Wayne, Ind., condemns the use of post-partum intra-uterine injections of carbolic acid as dangerous and needless. His arguments seem to us forcible and worthy of acceptance.

—An article read by Dr. Mary H. Stinson before the Pennsylvania State Medical Society on the work of women physicians in Asia is replete with facts showing what a wide field of usefulness is there being opened for those of the sex who wish to devote themselves to the nobler activities of the healing art.

—Two reprints on vivisection are on our table, one by Dr. James Macaulay, of Edinburgh, the other by Dr. A. Leffingwell, of this city. They both in effect condemn it as useless to medical art, and of small importance in physiology. They are both well written, and as special pleas on one side of a debated question, are good examples of argumentation.

—Dr. James Craig, of Jersey City, in a reprint from the *Transactions of the State Medical Society of New Jersey*, describes a number of cases of note. Among other matters, he details an original method of ligating the umbilical cord by a small band of India rubber, such as the stationers sell for holding papers together. He passes it four times around the index and middle fingers of the left hand, he then seizes the cord with the index finger of the right hand, stretching it with the index fingers of both hands, and slipping the funis through, withdraws the fingers and allows it to contract upon the cord.

—In a pamphlet of 23 pages before us, Dr. Richard Mollenhauer, of New York, describes a singular case of vertebral disease. It will be found of interest to specialists.

BOOK NOTICES.

Sanitary and Statistical Report of the Surgeon-General of the Navy for the year 1882. Washington, 1884.

We have never seen a more complete and satisfactory report from the Navy Medical Department than this; we may say none equal to it. The volume contains 622 closely-printed pages, and not much of it is padding. The statistical tables that constitute the bulk of it are of great value to the student of climatological medicine, setting forth as they do the results of varied surroundings, on subjects of the like ages and constitutions.

The medical descriptions by the various surgeons of the ports and coasts they visited are so instructive that we wish this feature were made more prominent. *

Many maps and diagrams are inserted, which add to the value of the volume. That it is sent forth without any table of contents, and with a wretchedly meagre index is neither more nor less than a discredit to the bureau, and is wholly without excuse.

The Lock-jaw of Infants (Trismus Nascentium). By J. F. Hartigan, M. D. 12mo., pp. 123. New York. Birmingham & Co.

The fatality of this disease, and the appalling mortality due to it, led the author to study its pathology with close attention. The result was that he adopted the theory of its causation advanced many years ago by the late Dr. Marion Sims, to wit, that it is induced by pressure of the occipital or parietal bones on the brain, through the intervening dura mater, finally expending its force on the pons, medulla oblongata, and the nerves issuing therefrom.

A number of illustrative cases are recorded, the literature of the subject is well worked up, and the prophylactic measures set forth with emphasis. It is a monograph that cannot fail to be of great benefit.

A Manual of Obstetrics. By Edward L. Partridge, M. D. New York, Wm. Wood & Co.

This is of the order of "vest-pocket" manuals, its recommendation being that it can be carried with one without inconvenience, and will serve to employ time usefully while waiting. It is a well-prepared epitome, and has a number of illustrations.

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MURIATE OF COCAINE: THE NEW LOCAL ANÆSTHETIC.

Local anæsthesia has been produced by the following agents: Alcohol, carbolic acid, chloralhydrate, chloroform, ether, carbon bisulphide, carbonic acid, ice and snow, morphia, gasoline, rhigoline, and the faradic current of electricity.

Recently, a new article has been brought to our notice by Dr. Koller, of Vienna, which seems to promise much. It is the active principle of coca or cocaine, and this agent is produced or extracted by displacement with hot water on the leaves of the erythroxyton coca (nat. ord. erythroxyllaceæ), a shrub indigenous to the mountains of Peru and Bolivia. The leaves are chewed by the natives. It is said to satisfy hunger, strengthen the weak, and to solace man under misfortune.

The leaves of the coca have been employed in the form of tincture and wine administered as a tonic to the muscles of the throat and larynx. Dr. Koller, of the Vienna General Hospital, was the first to discover and apply cocaine for the production of local anæsthesia. He found that the introduction of one to three drops of a two per cent. watery solution of muriate of cocaine into the corneal chamber rendered both the conjunctiva and cornea completely insensitive, so that, for instance, the cornea could be partially gouged without any reflex action or sense of pain. At the meeting of the Ophthalmological Congress at Heidelberg the same fact was confirmed and demonstrated by Drs. Brellaur and Becker. Koller, in his first report, mentioned the employment of the same agent in the production of anæsthesia of the larynx.*

Long before Koller's observations or experiments were made, the physiological property of cocaine of lowering—even of destroying—the sensibility of the sensory nerves has been noted by Morenny Matz, who published a monograph on the erythroxyton coca in Paris, 1868 (*Die Pflanzensloffee*, pp. 91-93). The latter states that cocaine has the power of impairing sensibility when locally applied (*Ibid.*, p. 93), and he is entitled to having made this important discovery; but he failed to

* London Lancet, October 4, 1884.

make it applicable to practical medicine, for Dr. Koller was the true discoverer of its valuable anæsthetic properties; for even the laryngologists only limited its use to diminish the sensibility of the larynx, but not one of them discovered its power of producing local anæsthesia, so that the parts could be cut or lacerated without giving pain. A two per cent. solution has been chiefly employed, and even a one-half per cent. has been employed with success in the ophthalmic clinic of Jefferson Medical College Hospital in two operations for strabismus by Dr. William Thomson. On October 31, 1884, we witnessed the two operations, which are perhaps the most painful in surgery. The cornea could be rubbed with the hook, and the eye speculum gave no pain, even the grasping of the conjunctiva with the forceps was borne with the slightest evidence of pain, and in the cutting twice of the tendon of the straight muscle of the eye there was not the slightest movement or evidence of distress. It proved a true mydriatic by dilating the pupil even with this weak solution of two drops every four minutes. The dilatation of the pupil began in fourteen to fifteen minutes after the solution was instilled into the eye, and reached its maximum in from thirty to forty minutes, remaining stationary for one hour, and gradually declining in twenty-four hours. In the same eye of the patient atropia in solution had been introduced, and the cocaine after, but they did not interfere with each other.

We have also seen this agent used by Dr. Shakespeare, of this city. He dropped a four per cent. solution into the eyes of two patients, with cataract, with the result of producing very complete anæsthesia in the eye so treated, so much so that he was enabled to perform iridectomy without eliciting any evidence of pain.

It has been used by Dr. Charles S. Turnbull, who, on November 2, operated upon the eye of a patient from the iron district of Pennsylvania, who two weeks since had one of his eyes badly injured by a piece of steel. The operation of making an artificial pupil was required to restore the sight. A drop of a four per cent. solution of the drug was dropped into the injured eye every

five minutes for half an hour, at the end of which time the finger could be rubbed over the eye-ball without any sensation other than a touch. The apparatus to hold the lids apart and the forceps with which the skin of the eye-ball was grasped caused no pain.

This anæsthetic has also been used in a few cases within the past two weeks by one or two eminent oculists in New York. This material is costly at present, and as it has not been made in this country, it will be some time before it will be cheap enough to be used in ordinary practice. It was used on Monday, October 27, for the first time at the Mount Sinai Hospital. A woman, fifty years of age, who was totally blind, was admitted to the hospital. She was suffering with double cataract.

On the afternoon of October 27 she was taken to the operating room and laid flat upon her back upon the operating table, in order to retain the liquid in her eye. The hospital staff and a number of physicians were present. The attending physician had a small quantity of the new anæsthetic, and used in the operation some that he had previously obtained. It is a colorless fluid, without taste or odor. The eyelids being held wide open, four drops of the liquid were cautiously dropped upon the surface of the eyes. It produced a slight anæsthetic effect upon the external coating. After an interval of five minutes four drops more were applied, which caused the insensible condition to extend deeper, and after waiting another five minutes, four drops more were used. After the last application had done its work, the sensation of the eyes was tested and they were found to be entirely anæsthetized. A pair of fixation forceps, the application of which no healthy eye can stand without causing a visible shrinking, were then applied and adjusted without any sensation being felt by the patient.

It is to be noted that the tincture, fluid extract, and wine of coca have been tried as local anæsthetics, but that they only produce a slight obtunding influence upon the surfaces to which they are applied, while the alkaloid of coca or cocaine would seem to have a decided anæsthetic effect.

While our experience with this agent is yet too limited to enable us to formulate any definite laws, yet our own observation would incline us to believe that in muriate of cocaine we have a valuable local anæsthetic, applicable to mucous surfaces, but having little if any effect upon the skin. It has been used in gynecological practice.

MASSAGE IN STRICTURE.

There is no doubt that many an old product of chronic inflammation has been absorbed in consequence of skillful massage. We have seen several cases, when cause and effect in this respect were too plain to be denied. In one case, where a false anchylosis was due to infiltration of the soft parts surrounding the knee-joint, and where the disease, having followed an accidental contusion, had lasted for over three years, the best surgeons in the city had tried in vain every possible remedy and remedial procedure, to cause absorption. No drug, that by external application might induce absorption, had been left untried, every known counter-irritation had been applied, the actual cautery been made use of, and the joint been stretched under ether, but all to no purpose. Finally, one of our most eminent professors of surgery handed the case over to a manipulator, and within six weeks every residue of the disease had disappeared.

We mention these facts to show that we have confidence in manipulation. But we doubt somewhat the following, though we report it that others may try it. Dr Géza v. Antal (*Cbl. f. Chir.*, 1884, No. 23) has published six cases where the stricture of the urethra was cured by massage. The applications lasted eight to ten minutes, and were made daily; in case of stricture of the cavernous part the manipulation was done over the skin, while in affections of the deeper part it was practiced from the rectum by simply passing two fingers, with slight pressure, up and down the diseased part of the urethra. It is said that very few applications were necessary to insure a cure. It is not said whether the strictures were callous or not, though we suppose they were dilatable. It is mentioned, however, that no other

treatment was pursued. Certainly, such an effect is possible, and we would recommend a more extended trial, as the result will pay for the labor if successful.

NOTES AND COMMENTS.

Muriate of Cocaine.

As of interest in connection with our editorial on this subject, we append the following experiences with this new local anæsthetic:

From the *London Medical Times*, October 25, 1884, we note that before the "Ophthalmological Society of the United Kingdom," Mr. Arthur Benson (Dublin) contributed some observations on the action of hydrochlorate of cocaine on the eye. He had experimented with a 2 per cent. and a 4 per cent. solution on himself and about twenty-five others, and found that anæsthesia of the cornea and conjunctiva was produced by a drop instilled into the conjunctival sac; that this anæsthesia came on almost immediately after application, and lasted only about five or six minutes, when it gradually but rapidly faded away. So far as his experience went, the drug was of no appreciable assistance in operations, the anæsthesia being too imperfect. In most cases, it produced slight paresis of accommodation, with partial dilatation of the pupil for about half an hour, followed by contraction of the pupil and spasm of accommodation, which again gave way to the normal condition of parts in about one and a half or two hours. He had extracted cataract, done iridectomy and some minor operations with its aid, but found no appreciable benefit except in the most trivial cases. The anæsthesia was very transitory, and it was therefore necessary, in order to obtain the best results, to use the drug very shortly before operating.

Mr. Marcus Gunn had used hydrochlorate of cocaine in three cases, scraping the cornea, tattooing, and needling, and had come to the same conclusions as Mr. Benson.

Mr. Nettleship had tried it in two cases. It had produced marked anæsthesia, without any inconvenience, and he suggested that, if the drops were frequently instilled, so as to maintain the effect, the drug might be practically useful.

Dr. E. S. Peck, of New York, writes to the *Medical Record*: "Of the three uses of the drug—one physiological, two clinical—at my hands, only one deserves special mention at this time, while all corroborate its anæsthetic properties. A

laborer received a clean wound of the lower lid, cutting through the conjunctiva, tarsal margin, and integument. A stitch in the conjunctiva and two in the integument of the lid were taken after six instillations of a four per cent. solution, covering twenty-five minutes. Patient experienced no pain, either from the forceps or needles, and stated that the sensation was as if something had been pressed against the parts involved."

We give the above for what they are worth. At the same time we ask our readers to let their judgment hold their enthusiasm in check. As we say in our editorial on the subject, it would seem that in muriate or hydrochlorate of cocaine we have a valuable local anæsthetic, but so many remedies are being constantly blazoned before our attention as possessing wonderful properties, that it behooves us to wait until the claims of enthusiasts are demonstrated to be the facts of clinicians. However, from personal observation, we are constrained to say that we believe that this new local anæsthetic promises much.

Internal Urethrotomy for Stricture of the Urethra.

It is universally admitted that it is dangerous to neglect urethral stricture, as retention of urine, perineal fistula, cystitis, and suppuration of the kidney are the most serious, and at the same time the most common consequences. Dr. Walter Coulson describes in the *Brit. Med. Jour.*, September 20, 1884, the operation of internal urethrotomy, as performed at St. Peter's Hospital, London:

A fine flexible guiding bougie, equal in size to No. 4 or 5 F. is passed into the bladder. The staff or sheath of the urethrotome is then screwed on to the guide, passed through the stricture into the bladder, and held in position by an assistant. The operator, with his left hand seizes the penis just behind the glans and draws it forwards; with his right hand he pushes the stem of the sheathed knife down the urethra until the obstruction is reached; the knife is then protruded, and all resisting tissue in front of it is divided. The incision is thus made in the roof of the urethra. The knife is then withdrawn into its sheath, which is pushed along the urethra in order to ascertain that the division has been complete. If it be so, the instrument is immediately withdrawn. A full-sized silver catheter is then passed; the bladder is emptied, and the catheter is at once withdrawn.

It occasionally happens that some difficulty is experienced in the introduction of the catheter after the operation. In some cases, this is due to the staff having been held too far out by the as-

sistant, so that the stricture is not completely divided. But this difficulty will not be experienced if the sheath be found to pass freely through the stricture after division. If it meet with an obstruction, the incision must be repeated. The passage of a full-sized silver catheter suffices to prove that the calibre of the urethra has been restored to its normal dimensions.

With regard to the after-treatment, the ordinary course is as follows: Immediately after the operation, the patient, of course, remains in bed; hot bottles are applied to the feet, and three grains of quinine are given with half an ounce of brandy. A little warm beef-tea is also given from time to time. If no rigors occur, the patient has a hot bath at night, and forty-eight hours afterwards a French bougie, corresponding in size to the catheter used after the operation, is passed along the urethra. The patient is then allowed to get up. The bougie is passed every three or four days, and, at the end of ten or fourteen days, the patient is taught how to use the instrument himself. When he is able to do this satisfactorily, he is discharged and attends as an out-patient, with instructions to use the catheter once a week. He is kept under observation for as long a period as he can be induced to attend.

After observations upon 206 cases, Dr. C. believes that a permanent and radical cure will result, provided that the stricture has been sufficiently divided to allow the introduction of a full-sized instrument, and the patient has learned the art of passing the bougie himself.

A New Treatment of Strangulated Hemorrhoids.

From the *Med. Press*, September 24, 1884, we learn that M. Charles Monod has written to the *Gazette des Hopitaux* an article on a new treatment of strangulated hemorrhoids which he has put in practice with the greatest success. This treatment consists in forcibly dilating the anus, as in case of fissure. M. Verneuil had already recommended this method for the cure of simple piles, and has been followed by most of the young surgeons, who have entirely abandoned every other treatment. To effect the dilatation, M. Verneuil employed specula of different dimensions, and only in the case, as has just been stated, of the ordinary condition of hemorrhoids. On the contrary, he says that "when the piles are the seat of sphacelus, he always waited until the complication disappeared." M. Monod, who has imitated M. Verneuil with the best results in those simple cases, goes still farther, and instead of regarding strangulation as a counter-indication

to the operation, considers that this fact renders it the more necessary. He cites a case in point. Being called by one of his *confrères* to see a gentleman who had been suffering excruciating agony for two days from strangulated piles, and on whom ice fomentations, narcotics *intus* and *extra* were tried without effect. Local examination showed no more than is ordinary in such cases—a ring of tumefied external hemorrhoids surrounding a packet of internal turgescient hemorrhoids, with a dark spot in the centre, announcing the commencement of sphacelus. The least touch was painful, and the patient demanded relief at any price. A partisan of the treatment of hemorrhoids in general by dilatation, he thought that he would be doing right in employing it in the present case, knowing that by suppressing the action of the sphincter the pain would cease. Accordingly, the patient was put under the influence of chloroform, and the hemorrhoidal tumors reduced, and then M. Monod largely dilated the anus with his fingers. A few minutes afterwards the patient awoke free from all pain, and in a few days he had the satisfaction of not only feeling that the strangulation had entirely disappeared, but that he was for ever quit of his piles. This case of M. Monod's proves that the hand dilates just as well as the speculum, and consequently the operation is reduced to its simplest expression.

An Operation for the Removal of Gall-Stones.

The *London Medical Press* tells us that the *Independence Belge* mentions a great surgical operation which has just been performed in Brussels by Dr. Langenbusch, of Berlin. The subject of this daring and successful proceeding was M. Eugene Anspach, the Deputy Governor of the National Bank of Belgium, who has been for many years suffering from a collection of gall-stones, which have kept him in a state of aggravated suffering (*doulleur atroce*), and have latterly defied all measures of relief. M. Langenbusch, summoned specially from Berlin, proposed to lay open the gall-bladder, with antiseptic precautions, admitting, however, that he had only performed this operation four times, and that but one of these cases recovered. M. Anspach's family and friends were much dismayed at this announcement, and begged that the operation should not be performed. M. Anspach was firm, and reflecting that without it he would not live long, and that in the meantime his life would be worse than death, decided on the operation. Even at this supreme moment the banking mind asserted itself, and M. Anspach re-

marked: "After all, one in four is twenty-five per cent., and that is a fine dividend." "You have had one recovery already, doctor," he remarked, "and I will be the second," an element of confidence which no doubt had something to say to the result. The operation was performed on the 19th of September, and 125 calculi were extracted from the gall-bladder. M. Anspach suffered a good deal after the proceedings, but is now out of danger and in complete comfort. We trust he will long live to enjoy the reward of his own pluck and of the skill of his surgeon. It is a curious circumstance that this operation has to a certain extent been anticipated here. The late Sir Timothy O'Brien suffered from gall-stones, and the late Sir Dominic Corrigan worked down into the gall-bladder by means of a potash issue, and removed them. Sir T. O'Brien's recovery was complete.

The Treatment of Ruptured Kidney.

After a severe fall, fracturing the seventh and eighth ribs, with pain on the right side of the abdomen and loins, but no evidences of external injury, the urine of a young man, about whom Dr. H. A. Reeves writes in the *Lancet*, October 4, 1884, contained blood. The pain diminished, and there was only a sense of discomfort in the abdomen. On the tenth day he became suddenly faint, and passed a pint and a quarter of nearly pure blood, which he continued to pass during the next four days. The abdominal and lumbar tenderness increased, and the hæmaturia appeared from time to time. He fell into a low, typhoid condition, peritonitis set in, and he died one month after the injury. The autopsy revealed a broken down condition of the right kidney. Dr. Reeves formulates the following treatment for similar cases: Directly it is found that bleeding is not controllable after trial of every known means, and before the patient is too weakened by hemorrhage, and also before septic phenomena have been allowed time to develop to an uncontrollable extent, a lumbar incision should be made over the kidney, and all clots, effused blood, and débris removed, and the cavity thoroughly cleansed. Then if it be possible to make out the remains of the kidney and to find the renal vessels and ureter, these should be tied and the renal remnants removed; but, as in a case like the present, such a proceeding would be tedious and dangerous. The better plan would be to introduce a drainage-tube into the loin and perform anterior nephrectomy by incising the linea semilunaris. This being completed, the abdomen and pelvis can be cleansed

if there be need, and the peritoneum on the posterior wall closely stitched up to shut off communication with the external opening into the loin. The abdominal wound is then to be closed and bandaged, and external urethrotomy or lateral cystotomy performed, so as to empty the bladder of all clots, to wash it out, and to drain it.

Formic Acid as a Germicide.

In the *Lancet* we read that the conditions of animal life vary immensely; the introduction of a single influence, not apparently of a powerful nature, may determine the death of some organisms. M. Schnetzer, a few weeks ago, communicated some observations to the Académie des Sciences, which serve to illustrate the above general principle. He has found that *bacterium subtilis*, one of the most difficult micro-parasites to kill, dies when in the presence of formic acid. Even when this bacterium has resisted the action of boiling water for one hour, it may be instantaneously killed by formic acid; a drop of water containing $\frac{1}{1000}$ th part of formic acid, added to a drop of water teeming with thousands of the bacteria, is sufficient to effect the purpose. The swarming fluid so treated may be introduced into the digestive tract with impunity. The author recommends the trial of formic acid on the cholera bacillus, and it may be suggested that its action on bacillus anthracis is equally deserving of experiment. If formic acid should be found capable of destroying the dried virus of charbon, provided this chemical agent does not injure imported wool, and in such a diluted state injury seems impossible; the suggestion that all imported wool be washed in a weak solution of formic acid might be of value in preventing the occurrence of so fatal a disease as malignant pustule and its allies.

Large Tumor Enveloping the Heart.

In the *Lancet*, Dr. Park relates a case where a child, aged seven, was brought to hospital suffering from great dyspnoea; pulse 150; respirations 40; temperature normal; a bulging forward was noticed on the left side of the chest; this bulging looked like an aneurism, but there was no bruit; superficial vessels greatly dilated over the prominent part, dullness over the same area. First cardiac sound very weak, second inaudible. Death took place in a week, during an attack resembling angina pectoris. Necropsy showed a large tumor completely enveloping the heart, which was "embedded in it as a fruit stone is in its fruit." The large vessels ran through the mass, and were

diminished in size from pressure; great general emaciation. The origin of the tumor could not be traced; it was of the size of a small child's head, and proved to be a round-celled sarcoma; other organs healthy.

The Heart and Liver as Affected by a Fall from a Height.

To the Medico-Chirurgical Society of Edinburgh, Dr. Littlejohn presented the liver and heart from a case illustrating the effects of a fall from a height. A heavy woman, aged about fifty, threw herself from a window in Allan's Close. The distance to the ground was measured and found to be eighty feet. She sustained injuries to her head, compound fracture of one of the thighs. The liver had sustained rupture. The appearance of the heart was interesting. The base, as not unfrequently happened, was ruptured, but in addition to that there were two very marked lesions, one on the right the other in the left ventricle. These were made out to be caused by two ribs which had been fractured and driven in upon the heart.

SPECIAL REPORT.

PROGRESS OF OTOTOLOGY.

BY LAURENCE TURNBULL, M. D.,

(Concluded from page 489.)

In destroying *erectile tissue tumors* of the posterior aspect of the inferior turbinated bone—Wooles advises first the snare and second the galvano-cantery. Another plan is to touch the growth with some caustic applied through a shield, glacial acetic acid being the best. To remove polypus, Jarvis' instrument, or some modification is the most generally useful one, inasmuch as in it piano-wire is employed, which does not kink—when polypus has existed for a considerable length of time, and in some other cases of only short duration, the new formation will be found to conceal a stratum of exposed or necrosed bone. *Simple deviation of the septum* seldom calls for surgical interference.

Perforation of the cartilaginous septum will result when there is a strongly marked divergence of the septum associated with the growth after removal of the latter. A necessary precaution is observed in operating with the galvano-cautery, through the ordinary dilating speculum, with metal blades, the latter is apt to get heated by contact with the electrode, and to burn the vestibule and the skin around the orifice of the meatus, the surgeon being

meanwhile quite unaware of the fact. To avoid this unnecessarily painful and possibly disfiguring result, he has had his operating speculum fitted with ivory blades (like those of Bosworth of New York), in place of metal ones, which do not conduct the heat. Further to avoid this contretemps, he has had electrodes covered with a thin plate of ivory up to the commencement of the platinum end, by which means the heat is further cut off from the chance of contact with the adjacent parts not included in the operation. Surgical procedures within the nasal cavity are generally succeeded by sharp febrile conditions—the temperature begins to rise on the second day and rapidly reaches 102° or 103°. For this reason he usually continues the quinine for two or three weeks, adding thereto iron, etc., as indicated. As regards local treatment, it suffices to spray the anterior nares with a simple detergent lotion. The following answers well:

B. Sodæ sulpho-carbolat., 3 ij
Boric acid, 3 ss
Aquam, ad 3 viij.

S.—Warm, and apply with spray apparatus two or three times daily.

After each application of the above a light plug of boric wool may be placed against the injured surface, and under any circumstances the patient should be kept in bed for a few days.

(6) A few remarks on Politzerization and new form of Politzer's bag for auto-inflation of the tympanum with respired air, by H. M. Jones, M. D.*

No one can doubt the therapeutic value of Politzer's plan of ventilating the tympanic cavity and of opening the Eustachian tube. After an experience of fifteen years with the use of the Politzer bag, our author has found it to be a safe, most efficacious, and often permanent mode of relieving deafness due to closure of the Eustachian tube or collapse of its walls, etc.; and having practiced every proposed modification of Politzer's plan, both as regards appliances and mode of application, he finds that the plain bag, with a piece of tubing attached, or the olive shaped nozzle of "Weber Liel," gives the best practical results. Simple as is this procedure, both surgeons and patients often fail to efficiently practice it. In his own practice he has had a patient to be affected with frontal purulent catarrh, after the use of Politzer's bag, and was consulted by another patient, with a similar affection attributed to violent Politzerization. Struck with his experience of the ill effects, or at any rate the probable

consequences of inflating by the bag, if held vertically, he has always cautioned students and patients to insert the nozzle in a horizontal direction, directing the current of air towards the orifice of the Eustachian tube, and not towards the frontal sinus and the delicate ethmoidal cells.

A new form of bag for the patient's use in auto-inflation he had made under his direction by Mr. Kerr, of Messrs. Godfrey and Cook, London. In selecting a bag, the nasal pieces should be fitted to the nostrils; or if the bag be sent for from a distance, be ordered in sizes, say Nos. 1, 2, 3. With the simple action of swallowing a little saliva, or the prolonged pronunciation, in nasal fashion, of the vowel *a*, the patient, even a child, can himself inflate the tympanum. It is better, however, if the act is performed, to use a little water. Each bag is made of the finest rubber, and is most compressible, the slightest pressure driving out the air contained.

Bag No. 1 has a tube and mouth-piece attached for filling the bag with respired air, or chloride of ammonia vapor. There are two ball-valves. When the bag is filled by the patient through the tube, the air is prevented escaping by the valve, and on compression, the bag remains empty until it is again filled by the tube.

Bag No. 2 has attached to it a reservoir, which is connected by a tube and valve with the bag for inflation. Another outlet valve is placed at the tube. The reservoir is filled in the manner already described, previous to its attachment to the bag. By compressing the bag, it can be filled from the reservoir, and the further action is similar to the small bag.

The following are hints which he has ventured to give practitioners when adopting Politzer's method:

1. Let the patient be seated.
2. Incline the head to one side and try inflation through either nostril; do this for both ears.
3. Direct the current as horizontally as possible.
4. Experimentally ascertain whether any form of nasal phonation, or act of deglutition, best dilates the aperture of the tube. Adopt this method with the individual patient.
5. If phonation, compress during the pronunciation; if deglutition, observe while the head inclines, the elevation of the larynx, and compress the bag at the commencement of its ascent.
6. In children, phonation is the best act to take advantage of, but direct inflation through the naso-pharynx may be sufficient. We can always inflate when the child cries. Most children, how-

*The British Medical Journal. May 3, 1884, pp. 850.

ever, if treated properly and gently, are apt to learn to assist, and to submit to Politzerization. With this bag he states there is no difficulty. He has several children at present using this small bag. The little patients use the single nasal best.

According to Von Trötsch,* when we desire that the patients should treat themselves, it is not sufficient to place an India rubber bag in the hands of the patient, but he should be taught not to rarefy the air in the middle ear after it is made dense, as is done by many, and even by physicians, by not closing the air-bag when withdrawing it from the nose.

The sensation of pressure in the neck (Pre-lang) sometimes experienced in the use of Politzer's method is extremely unpleasant. This sensation has been felt by children after the operation, causing them to prefer the introduction of the Eustachian catheter.

A more important disadvantage of Politzer's method is that we cannot localize the effect. If the resistance in both tubes or tympanic cavities be exactly the same, the air rushes into both, but when the conditions are unequal, the air always takes the course where the resistances are the slightest. This effect is more disturbing where one membrana tympani is perforated or partially atrophied, because the compressed air enters one ear alone, or chiefly so, no matter in which nostril it is introduced. In all such cases we must necessarily use the catheter. Lucae and Hinton state that they overcome this objection by compressing the air in the naso-pharyngeal space, by blowing through an elastic tube for some seconds at a time, allowing the patient to swallow the water at the instant he may choose.

The writer has never met in his experience with the Politzer bag the difficulties spoken of by Dr. Jones, with the exception of one case, a lady to whom it always gave pain in her stomach, and of another who had a slight bleeding from the nostril, which may have been from too roughly compressing the nose during the operation, as it only occurred once in many applications of this method. When there is a perforation or atrophy of the membrana tympani, we never resort to the use of the Politzer air-bag, but to the Eustachian catheter, so as to limit it entirely to one ear. In one or two instances perforation of the membrane has followed the too forcible use of the air-douche.

These three pamphlets, numbers 6, 7, and 8, are well and carefully written by the nephew of Dr. Mackenzie, of London, and show talent in the

way of research, as well as carefully-conducted experiments. In the first he makes it clear, both from history and personal clinical observation, that excessive indulgence in lust or secret habit has a tendency to aggravate existing disease of the nasal mucous membrane. This may be either from reflex action or the repeated stimulation and congestion of the turbinated erectile tissue of the nose.

In this second pamphlet, the title of which we do not like, the treatment is only practically given, being devoted to the surgical removal of the hypertrophied nasal inflammation, and he recommends the removal of these hypertrophied masses by the cold wire snare, by his modification of the original instrument of Dr. Jarvis, of New York.

After describing most carefully the operation with the aid of the rhinoscope, the nostrils being first dilated with the speculum, and the wire loop passed, under the guidance of a strong light, through the slit between the turbinated bones and the septum, into the naso-pharynx. The after-treatment consists of spraying the nostrils with a soothing disinfectant and detergent spray.

The advantages which may be claimed for this operation, apart from its comparative painlessness and simplicity, may be briefly summed up as follows:*

1. It fulfills in the simplest and most radical manner the chief and absolute indications in the treatment of hypertrophic nasal catarrh, viz., the removal of the obstruction.

2. It restores the respiratory current to its normal channel, thereby avoiding the irreparable injury with which the organs of respiration, vocalization, audition, and olfaction are necessarily threatened.

3. It removes the most prolific source of the discharge in nasal catarrh, and favors the return of the mucous membrane to its normal state.

4. In the majority of instances, it causes the various complications, and especially those of reflex character, to disappear.

5. By the depletion of the cavernous cells and the turbinated bones, it exercises a beneficial effect upon the whole area occupied by the erectile tissue.

For post-nasal and pharyngeal inflammations, he has also used the *tincture of galanga* with excellent results. He has had an alcoholic tincture of the root, diluted according to circumstances, prepared for use in spray behind the soft palate. This

*Page 17 of pamphlet on Naso-Aural Catarrh, and its Treatment. Dr. John M. Mackenzie.

*Von Trötsch "On Disease of the Ear," pp. 237, 241, 242.

has an aromatic, not unpleasant, odor, and produces a sharp, pungent, peppery sensation, which subsides, however, almost instantaneously, and generally affords immediate relief. The application leaves an agreeable astringent sensation in the throat, which lasts for some time, and is not open to the evil results which follow the use of nitrate of silver and similar substances in that locality.*

The use of powder in the nose will often do more harm than good *unless the substance be reduced to an impalpable state.*

One word in regard to the treatment of hypertrophic inflammation of the middle ear. Let us take an illustrative case. The drum-head is gone, a chronic otorrhoea has been established. The ossicles have long since been swept away in the discharge. Over the promontory the hypertrophic membrane appears as a swollen, thickened mass, smooth or granular in appearance, or projecting outward as a well-defined tumor, which every one at the outset of his aural studies has mistaken for polypus. This hypertrophic mass encroaches on the cavity of the drum, and is the most prolific source of the discharge. The principle which governs us in the management of hypertrophic nasal catarrh is equally applicable here. If ordinary methods fail, or if it be an excessive projection outward, like a polypus, it should be snared, or excised, with the ring knife, or destroyed by caustic applications, the galvano-cantery, etc.

The third pamphlet is "On the Deflection of the Nasal Septum and Its Treatment."

The influence of nasal obstruction in the evolution of morbid conditions of the lower respiratory tract and middle ear, is at present engaging the attention of special workers throughout the world, and the day is not far distant when the general body of the profession will find in the treatment of pathological states of the nose, a prime factor in the therapeutics of the throat and aural disease.

Among the causes of acquired deflection, the most frequent is, doubtless, traumatism. It is possible that injury to the nose, and consequent deflection of the septum, may occur during difficult parturition.

Localized spurs and projections are best removed, when their form permits it, with the cold-wire snare, the growths being seized with forceps and the wire passed over them; or, still better, by previously transfixing them with a glover's needle, as suggested by Dr. Jarvis,† of

New York. Compression should be made slowly to prevent hemorrhage, which in some cases is otherwise excessive.

The most satisfactory operation for the restoration of the septum is that which is generally known as "Steele's," and which has been recently brought before the profession by Dr. Glasgow,* of St. Louis.

"In passing to the management of the deflection of the bony septum, let me say one word in regard to the operation of perforation of the cartilaginous septum by means of the punch. This method, first performed by Blandin,‡ consists in connecting the two nostrils by punching out a portion of the cartilage with a forceps, devised for the purpose, resembling a ticket-punch.‡ The opening thus made may further more be enlarged by cutting the cartilage with a knife or scissors. Apart from the creation of a condition which disturbs the physiological relations of the air current, the tendency to scabbing, and the difficulty of thoroughly cleansing the nostril after the operation, this procedure must be looked upon as, at best, only a palliative measure. When deflection takes place at or near the lower border of the vomer, occlusion of the corresponding inferior meatus results, and the nostril ceases to functionate as an organ of respiration. The general counsel of the more conservative is to let such deviations severely alone.

In the course of some remarks made at the last meeting of the Medical Society of Va., Dr. Mackenzie proposed as a substitute for the operation on the septum in certain cases especially when deflection occurred in the deeper portions of the nostril, the removal of the inferior turbinated body of the *obstructed* side. This proposition he since carried out in a case with success.

The fourth pamphlet is "On the Galvano-Cautic Method in Nose and Throat."

We notice this pamphlet on purpose to make some remarks upon the wholesale use of this method which is now practiced by so many so-called throat specialists to the detriment of the patient's nose and pharynx and to the injury of the profession, as honest men. This gentleman is very eulogistic and enthusiastic, he desires to "widen its use," and he submits *his experience*, which consists of a report of only one of his one

* Refer to Pamphlet, "Deflection of the Nasal Septum," etc.

† Compend. de Chirurgie, vol. iii., p. 33.

‡ This instrument has been variously modified by Rupert (Wien Med. Wochenschrift), 1868, p. 1157, Med. News, Philadelphia, 1882, p. 295, and others.

* Page 17 of Pamphlet.

† Archives of Laryngology, October, 1872, vol. i., p. 44.

hundred and fifty cases. We would have been better pleased for him to have given a table with at least a few cases which were not "much improved," for we have known a number of such cases which have passed from one specialist to another, nothing better, but rather worse.

Is the galvano-cautery a dangerous agent?*

If not employed with caution and great care. Its incautions use in the nose may be followed by inflammation there and in the various contiguous organs, even to erysipelas of the head and face. Lennox Browne, of London, cites as unfortunate results in his practice several cases of purulent otitis media, and mentions as a safeguard, after intra-nasal operations the injection of warm alkaline solutions, and coating the burnt surface with oiled cotton wool, to protect the charred surface. Permit me to quote his recommendations as to the degree of heat to be employed: a "black heat often answers for all that is required; a dull red heat is seldom needed, and by me never exceeded; a bright red heat is quite unnecessary; anything like a white heat is absolutely to be avoided as dangerous."

We find that simply splitting up these hypertrophic enlargements by the knife answers a good purpose, also touching the surface with caustics, such as chromic acid, glacial acetic acid and nitric acid or with a mixture of tincture of iodine and glycerine, and in syphilitic formations a solution of nitrate of mercury with the internal use of iodide of potassium. This mode of treatment has been more successful in partially removing and absorbing them in my hands, than their entire removal, which is at times attended in the galvanic cautery with contraction, and imperfect cicatrization, or by a patch of sclerosed mucous membrane which is never destroyed. The snaring by Jarvis' instrument is a much safer method. The ordinary enlarged tonsillar follicles are numerous and can as a rule be relieved in a great measure without surgical interference; but they must not be confounded with adenoid growths found behind the soft palate, which when operated upon require great care in their removal as the hemorrhage is sometimes so profuse as to require prompt plugging of the posterior nares, and the application of pressure with persulphate of iron by the finger to the spot. Fortunately the latter form of tumor, although much discussed and treated, is more rare than we would anticipate.

The following accidents have occurred in the

use of the galvano-cautery, even when employed with care by competent and able advocates of the cautery electrode. It is recorded that in destroying a growth upon the turbinated bones with the cautery it accidentally burned the opposite part of the septum nasi, which nearly resulted in permanent agglutination of the nasal passage.

Also accidentally burning the rim of the Eustachian orifice with the cautery electrode, while removing a growth from the vault of the pharynx, causing otitis media of a serious character, and in another case otitis media purulenta was caused in the ear opposite from the nostril in which the operation was performed, and was attended with symptoms of so serious a character as to threaten the life of the patient. In another instance, a slight cauterization of hypertrophied mucous membrane upon a turbinated bone, caused facial erysipelas that nearly proved fatal. Almost all good authorities admit that patients have fever the day after the operation, and must go to bed. It is stated* that a strong young man on whom the galvano-cautery had been used, had within two hours violent earache and headache, and in a few days perforation of the tympanic membrane and purulent discharge from the ears. It is noted 'apologetically' for this method that "Meyer and Wendt" had inflammation of the middle ear, followed by suppuration in a patient operated on by them with the modified galvano-tonsillitome.

In conclusion, it is my candid opinion from long experience that the indiscriminate use of the galvano-cautery is apt to injure, unless great care is taken by practitioners, and the proper class of cases selected for operation.

There are a few cases where we use the galvano-cautery with advantage that the thermo-cautery or Jarvis' snare cannot be used, there not being room enough in the narrow channel of the nostril for the introduction of the latter instrument. We would refer those who are interested in the special branch of aural medicine and surgery to the following valuable papers published during the year 1884.†

"The Temperature of the External Auditory Canal," by A. Eitelberg. Translated by Edward Fridenberg, M. D.

"Two Rare Cases of Mechanical Injury to the Organ of Hearing." By S. Moos, of Heidelberg. Translated by Charles J. Kipp, M. D.

*St. Louis Medical and Surgical Journal, January 5, 1880, p. 95.

†Archives of Otolaryngology, Knapp and Moos, vol. xiii., No. 2. G. P. Putnam & Son, New York, 1884.

†Page 2 of Pamphlet. "Galvano-Cautery Method on Nose and Throat," by I. C. Malhall, M. D., St. Louis.

"Three Rare Cases of Ear Affections as a Consequence of Syphilis." By Moos, of Heidelberg.

"Fourteen Cases of Chiselling of the Mastoid Process Performed in the Polyclinic for Diseases of the Ear, during the Year 1883." By Dr. Hartmann, Berlin.

"Bougieing the Eustachian Tube." By V. A. Eitelberg, of Vienna. Translated by Dr. Cornelius Williams, of St. Paul, Minn.

"Report of the Twentieth Annual Meeting of the American Otological Society." By H. Knapp.

"Normal and Pathological Anatomy and Histology of the Organ of Hearing," by H. Steinbrügge, of Heidelberg.

"Physiology of the Ear and Physiological Acoustics, in the year 1883." By Oscar Wolf, of Frankfort-on-the-Main.

"Pathology and Therapeutics of the Organ of Hearing." By A. Hartmann, of Berlin.

"Hæmatoma Auris." By Samuel Sexton, M. D. *New York Med. Record*, July 5, August 2, 9, and 16, 1884.

"Does a Chronic Discharge from the Ear Make Life Insurance Hazardous?" By Charles S. Turnbull, M. D., Aural and Ophthalmic Surgeon, German Hospital, Philadelphia. *Transactions of the Medical Society of the State of Pennsylvania*, 1884.

CORRESPONDENCE.

A Case of Gastric Ulcer or Cancer.

EDS. MED. AND SURG. REPORTER:—

Having had under my care for the past eight months a case of considerable interest to me, and thinking it might be of some interest to your numerous readers, I will send you a report of the same for publication in your journal.

On the sixteenth of last February was called to see Mrs. M., a native of Wales, 42 years of age, widow, mother of five children, the youngest ten years of age. her weight 235 pounds, and height about five feet three inches. Her health, to the time of the beginning of the present illness, had always been good. For about one year previous to my first visit she had symptoms of indigestion, such as acidity of the stomach, pain in the epigastric region, which was increased after eating, and not relieved until the stomach was emptied either by an emetic or spontaneous vomiting; she also had constipated bowels, and loss of strength and appetite.

Her symptoms at this time (my first visit) were pain of a sharp, lancinating character, over the region of the stomach, extending through to the back, tenderness on pressure over the epigastric and hypochondriac regions; her tongue was slightly coated, bowels constipated, pulse and temperature normal; her stomach would not retain any food whatever. If the smallest quantity of any

food was taken, the pain and uneasiness would be greatly increased until it was all ejected.

The skin had an earthy, jaundiced appearance, and there was considerable loss of strength, but not much emaciation. She stated that menstruation was normal in every respect.

As regards the pain, there seemed to be no distinct remission, only that it was not so severe when the stomach was entirely empty. On account of her obese condition no tumor or enlargement of any kind could be detected in the region of the stomach. Here, then, was the question: Was this a case of chronic ulcer of the stomach, or one of pyloric cancer? That it was one or the other I felt confident, and concluded that the subsequent symptoms and course of the case would decide that, and waited for future developments. There was no history of hereditary cancer, no cancerous cachexia, not even loss of flesh to any great extent; yet the persistent and lancinating character of the pain, its unremitting nature, with the extreme acidity of the stomach, would point in that direction. The vomited matter had at times the peculiar coffee-ground look, said to be characteristic of cancer.

It is now eight months since my first visit, and during that time she has had all the symptoms presented when first seen, but in a more aggravated form. In addition, she has on several occasions vomited two or three ounces of blood; has passed blood from the bowels, has emaciated considerably, but not rapidly enough for cancer.

During the first five months her stomach would not retain any food whatever, not even water at times; and during most of this time she was confined to bed, the pain has been excruciating at times, at others more of a dull gnawing character. She was seen at different times by a number of my professional friends, but no one would be positive in his diagnosis; it was either ulcer or cancer, not likely the latter, because they could not detect a tumor through two inches of adipose tissue on the abdomen.

About four weeks ago she began to improve, the pain and uneasiness gradually proving less, vomiting very rarely, gradually returning strength, remaining out of bed most of the day, and on several occasions walked several squares away from home.

As regards the treatment, which is I think the most interesting part of this case, in the way of medication my first endeavor was to quiet the stomach and control the pain by sulphate of morphia, Subnit. of bismuth, dilut. hydrocyanic acid, Fowler's solution, wine of ipecac in drop doses, nitrate of silver, etc., in fact the whole list of medicines calculated to control such a rebellious stomach; but one was as good as another, and none did any good.

As regards food, she was given beef tea, peptonized milk, milk and lime water, raw beef juice, etc., all of which increased the pain and uneasiness and were rejected almost as soon as swallowed.

It was then decided to give the stomach an entire rest from all food or medicine, to control, if possible, the pain by the hypodermatic injection of morphia, and to sustain her by rectal alimentation. For three months she received four injections during every twenty-four hours of four ounces of

beef essence, milk with raw egg and mutton broth, changing from one to the other in the same manner as if it were taken by the mouth.

To sustain the life of a patient for a period of three months by rectal feeding alone, under any other circumstances, would hardly have been possible; but in this case the absorption of adipose tissue and the feeding combined would, I think, have sustained her even longer.

Under this treatment the stomach would not become entirely quiet, the retching, vomiting, and pain continued, although not as severely as when food was taken by the mouth; so that even this could not be considered a success.

About two months ago my attention was directed to the beef peptonoid manufactured by Reed & Carnrick, and I concluded to see what it would do for my patient. She was directed to take two teaspoonfuls of the peptonoid in a cup of hot water, four times a day, and discontinue the rectal injections.

She has taken nothing but the peptonoid since, has retained nearly every portion taken; states that it produces an agreeable sensation in the stomach; the pain is growing less, vomits rarely, and is beginning to have a little appetite for other food; the appearance of the tongue is natural, color of the face much better, sleeps well most of the night, requires very little morphia, and is gaining strength—in fact, is apparently recovering—all of which would go far towards excluding the question of cancer, and confirming the diagnosis of gastric ulcer. D. A. HENGET, M. D.

Pittsburgh, Oct. 21, 1884.

NEWS AND MISCELLANY.

Micro-Organisms—Organisms Associated with Diseases of Animals.

In continuation of our report of the micro-organisms exhibited at the International Health Exhibition (page 493), we, this week, give the following from the *Brit. Med. Jour.*, September 27, 1884:

Micrococcus Tetragenus.—In the sputa of phthisical patients, in whom rapid destruction of the lung is in progress, there occur sarcina-like groups of micrococci, which, on staining, are seen to consist of groups of four, enveloped by a hyaline capsule. The micrococci are at regular distances from one another, and the diameter of the group is about one-third that of a red blood-corpuscle.

A cultivation of the organism in gelatinized meat infusion has well-marked characters, the colonies being large, and the growth especially abundant at the upper part of the needle-track. Guinea-pigs and mice inoculated from the cultivation, die after an interval varying from two to ten days, and the characteristic groups of micrococci may be found in the capillaries throughout the body, often forming large masses which, when they occur in the spleen, may burst through the peritoneal coat, and set up peritonitis (Gaffky, *Langenbeck's Archives*, vol. xxviii).

Bacillus of Mouse Septicæmia.—This bacillus is frequently present in putrefying blood and meat-infusion. When several drops of such fluid are injected beneath the skin of a mouse, the animal

at once becomes ill and dies, poisoned, after an interval of five to eight hours; a drop of its blood inoculated into another mouse is harmless. If a quantity of the putrefying fluid insufficient to cause poisoning (one, or at most two, drops) is inoculated subcutaneously into a number of mice, no such immediate effect is produced; but, after about twenty four hours, some of the mice (one-third of them on an average) become ill, and die in forty to sixty hours after the inoculation. The blood of mice which have died in this manner is highly infective, one-tenth of a drop being sufficient to bring about the same process in another mouse. Such blood is found to contain numerous small bacilli, which measure 0.8 to 1 μ in length, and are especially abundant in the interior of the white corpuscles. When cultivated in gelatinized meat-infusion, the bacilli form a very delicate cloud, extending out into the material from the line of inoculation. Though house-mice are so profoundly affected by this bacilli, field-mice, which belong to an allied genus, are quite proof against it. On rabbits and guinea-pigs, only a local effect is produced. When the ear of these animals is inoculated, redness and swelling appear, which spread over the ear, and disappear after five or six days. After this, the animal is, for some time at least, unable to be affected by the bacillus (Koch on *The Etiology of Traumatic Infective Diseases*; Gaffky, *Mittheilungen aus dem Gesundheitsamte*, vol. i).

Bacillus of Chicken-Cholera.—Poultry are liable to an infectious disease, which has received this name. The affected birds become very sleepy and inactive, and after death enteritis of the duodenum, with hæmorrhage, is found. Inoculation of the blood into a healthy bird is followed by the appearance of the disease. The blood abounds with minute bacilli, which have the peculiarity of staining deeply at the two ends. These may be cultivated in chicken-broth or gelatinized milk-infusion, and in the latter small colonies form along the track of the inoculating needle, with very little extension of the growth on the surface. The pigeons or fowls are inoculated from the cultivation, they die in seventeen to twenty hours, and the characteristic bacilli are found abundantly in the blood. (Pasteur *Bulletins de l'Académie de Médecine*, Février, 1880.)

Bacillus of Rabbit Septicæmia.—This disease was induced by Koch by injecting putrid fluids beneath the skin of rabbits. The bacillus which he obtained may be readily cultivated in gelatinized meat-infusion, and forms colonies which, like the bacillus itself, closely resemble those of the chicken-cholera bacillus. The smallest trace of a fluid containing the organism is sufficient to set up the disease when inoculated into another rabbit, death occurring in sixteen to twenty hours. The bacilli are found in great numbers in the blood. (Koch, Gaffky, *Mittheil. aus dem Kais. Gesundheitsamte*, vol. i.)

BACTERIA AFFECTING MILK.

Bacterium Lactis.—This bacillus occurs in great numbers in milk. It is small, oval, and actively moving. In gelatinized meat-infusion, it forms a thin transparent expansion on the surface of the cultivating material, with concentric rings marking the stages of growth. In the interior of the

mass, the growth is rather slender. When a flask of milk, which has been plugged with cotton-wool and sterilized by steaming, is inoculated with this bacillus, the milk "turns sour," and curds and whey are formed. No further change takes place in the milk which has been so affected, so long as the cotton-wool plug remains in place. (Lister, *Pathological Transactions*, 1877; also see Hueppe, *Mittheilungen aus dem Gesundheitsamte*, vol. ii.)

Bacillus Butyricus.—This is an actively moving bacillus, about three to ten μ in length, and less than one μ in breadth. It sometimes grows out into long, apparently unjointed, threads. It is the cause of the butyric acid fermentation in solutions of starch, dextrin, and sugar, which results in the formation of butyric acid, carbonic acid, and hydrogen. It may be cultivated in gelatinized meat-infusion, and causes it to become liquid, the bacilli accumulating on the surface as a thick, corrugated scum. (Hueppe, *Mittheilungen aus dem Gesundheitsamte*, vol. ii.)

Bacillus of Blue Milk.—This is the bacillus which causes the blue color which is sometimes seen in souring-milk. It may be cultivated in gelatinized meat-infusion, and causes a color-change to appear in it. By reflected light, the color is often a bright blue-green; but, by transmitted light, it appears smoky brown. The color appears in the infusion at some distance from the growth itself, which forms a thin film on the surface of the mass of cultivating material, and is insignificant along the needle-track.

Organisms Producing Colors.—Certain organisms, in addition to their microscopical characters, and the peculiarities of their growth in cultivating media, possess the feature in addition that they cause special colors to appear round about them. The color produced in this way by an organism does not vary, but is always the same at the same stage of growth.

The organisms of this nature cultivated in the Laboratory are the following:

Micrococcus Prodigiosus, producing a deep crimson color.

Micrococcus Indicus, producing a bright rusty-red color.

Violet Bacillus, liquefying the gelatinized infusion, and forming a deep violet layer at the bottom of the liquid part.

Fluorescing Bacillus, causing a curious greenish-yellow color.

Bacilli of Green and of Blue Pus, and a species of *Sarcina* causing a yellow color.

There are also three kinds of *Torula*, two of which produce colors in contact with the air—namely,

Red Torula, producing a beautiful coral pink color.

Black Torula, producing a black color.

Moulds.—*Tinea*, or *Favus Galli*, which causes a remarkable affection of the skin in fowls.

Four species of *Aspergillus* are cultivated in bread-infusion: *A. albus*, *niger*, *fumigatus*, and *flavescens*, the two latter causing the death of rabbits when injected into the veins.

Profits on Drugs.

George J. Manson says in *St. Nicholas* for November: "There have been two important changes

in the drug business within the past few years. In the first place, the scope of the drug store has been enlarged. In old times the term "drug store" indicated an establishment where simply drugs were kept. Now you can go to many drug stores and purchase cigars, tobacco, canes, umbrellas, tea, coffee, stationery, confectionery, and many kinds of fancy articles. Some say that druggists have been forced into selling these goods on account of the competition they have had to contend against in the sale of patent medicines by dry goods establishments and book stores, and because some of their own number sell patent or proprietary medicines below the regular marked price. There is much truth in this statement, but I think there is another reason to account for the practice, and that is the increased rate of rent. In former times the item of rent was not so great as it is now, and the druggist could make a good living by confining himself to drugs proper. Now the expense for rent is a matter for serious financial consideration. It is true that the business yields a large percentage of profit, but the total sales are comparatively small. At one time, when the calling was confined to its legitimate sphere, the profit was fifty per cent. Now the average rate of profit is probably twenty-five or thirty per cent."

A Reminiscence of the Late Prof. Gross.

In the course of a memoir by Dr. Walter Lindley, published in the *Pacific M. and S. Jour.*, we note the following paragraph:

"Prof. Gross was a grand man in appearance as well as in fact. One picture is indelibly impressed on my memory: It was during the winter of 1871 or '72 when the students to the number of five or six hundred were assembled in the amphitheatre of Jefferson Medical College. Two students got to fighting about a seat, others began taking sides, and there were bloody noses and men falling over seats on every hand, when in the midst of all this great confusion Prof. Gross stepped into the arena, and with an imperious gesture said, 'Gentlemen, for God's sake remember where you are and who are!' All was still as death before he was through speaking. Oh! the grand old man! I can see him now as he stood there with his flowing white locks, his noble forehead, his piercing eyes, his uplifted hand, the incarnation of majesty; such a man needs no crown to make him king among men."

Items.

—The death of Professor H. von Zeissl, the distinguished syphilidologist, is announced as having taken place at Vienna on the 23d of September, at the age of sixty-seven years.

—The contagious pleuro-pneumonia of cattle now prevailing in several of the Western States is said to have been traced to a herd of cattle sent west from Baltimore. All the affected cattle west of Ohio are stated to be thoroughbred Jerseys.

DEATH.

SCHENCK.—October 10, 1884, Dr. C. F. Schenck, of Reading, O., aged 76 years.